APPLYING GENERAL STRAIN THEORY TO MISCONDUCT AMONG SOUTH KOREAN OFFICERS

By

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To my parents, Wongyu Park and Jeomdan Lee, who have raised me as who I am
I love you!
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Police misconduct is a serious social problem in the world. While police misconduct is highly prevalent, clear practical explanations of police misconduct are lacking. This study drew on Robert Agnew’s General Strain Theory (GST) to examine the relationships between officers’ strains, negative emotions, conditioning variables, and misconduct. Survey data from 599 officers working in the Daegu Metropolitan Police Agency was examined within a Structural Equation Model (SEM). The direct, indirect or mediating, and moderating effects were analyzed in terms of police strains, negative emotions, and conditioning variables as potential predictors of misconduct in a South Korean context. The results from SEM analysis indicate that major portions of this study supported GST. The removal of positive stimuli strains predicted negative emotions and misconduct. In the mediation model, anger and depression fully mediated the relationships between strains and misconduct. Depression proved to be a more influential negative emotion than anger. However, the conditioning variables of social support, self-efficacy, and differential association failed to demonstrate moderating effects on the relationships between strains and misconduct even though each
conditioning variable showed a direct significant relationship with misconduct. Policy implications, limitations, and future research are discussed.
CHAPTER 1
INTRODUCTION

Police misconduct is a critical issue in societies around the world. This proposal seeks to use the General Strain Theory (GST) to examine police misconduct. Specifically, it will assess whether GST has a strong relationship to police misconduct in South Korea. The GST proposed by Agnew (1992) has been tested extensively to demonstrate that strains cause delinquency through negative emotions with conditioning variables. This research can provide more in-depth knowledge for understanding and preventing police misconduct in South Korea, and it will promote extending the applicability of the GST by integrating current knowledge with the new outcomes from this research.

This project has the potential to make significant contributions to the field of Criminology:

- The comparative application of the GST in a culturally different country will increase the applicability of the theory and clarify its scope.
- This research will provide an opportunity to inform diverse groups of South Korean police officers of social science research on the importance and influence of police misconduct on society.
- Results of this research will be disseminated broadly to criminologists, police officers, criminal justice practitioners, and community members to further scientific research and a common understanding of the GST, especially as it relates to police stress and police misconduct.
- It also will inform citizens about what society can do to improve the behavior of police officers.

**Specific Aims**

There is little research analyzing police stress and police misconduct from the perspective of criminal theory. Moreover, the research on police misconduct largely ignores important factors related to the specific characteristics of police officers and
their work (e.g. work shifts, violent criminals, and crime scenes). Many studies relating to police stress have reported that police work is particularly stressful (Anshel, 2000; Dantzer, 1987; Kurke, 1995; Morash, Haarr et al. 2006; Pearlin, 1989; Pienaar et al. 2007; Territo & Vetter, 1981). The stresses experienced by police officers influence their entire lives and the lives of their family members as well (Williams, 2003). Thus, addressing police misconduct when problems first arise is essential to building an accountable police force. From this standpoint, police work should be recognized as one of the most difficult and important jobs, which can affect the lives of all citizens by combating crime and preserving public safety and property.

According to Territo and Vetter (1981), many police officers have experienced mental health problems and stress syndromes. However, to date, there are few theories about the connection between these findings and police misconduct. This study is the first step toward integrating an appropriate criminal theory for the purpose of creating a comprehensive model to prevent police misconduct.

**Background on Police Misconduct and Its Impact on Society**

Since the mid-20th century, misconduct by American police officers has been in the middle of social issues. Excessive use of force, corruption, and discriminatory enforcement of the laws have been common (Kappeler, Sluder, & Alpert, 1998).

During the Civil Rights movement in the 1960s, the reputation of the police was greatly damaged by media reports of racially motivated police brutality in African-American communities. In the 1990s, videos from the Rodney King incident in Los Angeles again sparked intense citizen rage over police brutality, especially involving people of color (Lasley, 1994). A series of misconduct charges (theft, burglary, murder, drug trafficking and drug use, and bribing) was also brought against other large police
departments, including those in New Orleans, Philadelphia, New York City, Detroit, and Pittsburgh.

The history of South Korea has also been riddled with a difficult and destructive police force. Until the 1940s, South Korea was under Japanese rule, and the police brutally controlled the citizenry on behalf of the Japanese government. The police presumed citizens were guilty even before a trial; they tortured suspects in order to obtain confessions and incarcerated people without a trial (Chung & Spencer, 1985). Even after the country won its freedom from Japan in the 1940s, the South Korean police continued to be a tool for the new regime, abusing citizens’ rights (Lee, 1990) and oppressing anti-government demonstrators with inappropriate use of deadly force (Cohen & Baker, 1991). The police engaged in an era of seemingly incurable corruption until the 1990s. To highlight this corruption, there was even a cultural and organizational custom in which the citizenry and police engaged in mutually beneficial enticement (Kim, 1998). Many higher-ranked police officers were arrested for bribery and abuse of authority in terms of money-related businesses (Kim, 2002). These historical events are indelible stains on the reputation of South Korean police.

Due to many highly publicized incidents, police misconduct has been, and still is, a highly debated issue in South Korea. Yet there are no practical criminal theories that explain police misconduct or its prevention. This is why further research is needed to discover the cause of police misconduct and to create prevention policies based on proper theories.

**Stress, GST, and Police Misconduct**

Pearlin (1989) defined chronic stress as the cumulative damage from difficult situations in everyday life. This chronic stress also affects an individual’s ability to cope
with emotional and physical disease and injury. For police, chronic stress affects officers’ mental and physical health, as well as the health of their personal relationships. Research indicates that an extremely high percentage of police officers are at risk of divorcing their spouses (Alkus & Padesky, 1983). The burden of balancing family obligations and police responsibilities can lead to a stressful environment for officers. Occupational stress and an accompanying mental or physical health condition can have an impact on the morale of the police force, the force’s performance, and the quality of police service, as well as the individual officer’s personal well-being (Daniello, 2011).

Few governmental institutions exercise such a comprehensive scope of law enforcement as do the police. Although police officers often need to use legal force or coercion in order to combat crime and preserve public safety and property (Scharf & Binder, 1983; Sherman, 1980; Walker & Fridell, 1993). Riksheim and Chermak (1993) reported that just one incident of excessive use of force has the risk of precipitating an event that can ignite episodes of social disorder. By inflicting physical and emotional trauma, police can become the actual cause of societal wrongs (Friedrich, 1980).

In addition, various studies report that police officers are not willing to expose their colleague’s misconduct (Chemerinsky, 2000; Christopher, 1991) and that the officers also would commit perjury in order to defend their colleagues (Chin & Wells, 1997). A survey published in 2000 showed that 52.4 percent of police officers would turn a blind eye to police misconduct by peer officers (Weisburd, Greenspan, Hamilton, Williams, & Bryant, 2000).

Even though police misconduct greatly impacts society, research still has not found any single influential theoretical explanation. Although more studies on police
conduct are being performed, they rarely demonstrate causal relationships among the main variables commonly associated with police misconduct. However, one theoretical perspective that could interpret the relationships between police stress and misconduct is the GST formulated by Robert Agnew (1992). In this context, Agnew and Brezina (2010, p. 101) defined strain as “an event or condition that is disliked by individuals.”

Agnew (2001) examined whether certain strains\(^1\) were more influential on certain delinquent behaviors and whether specific groups in which the strains are more prevalent should be further studied. With adaptive coping mechanisms, an individual can manage these strains. These include self-efficacy, social support, and problem-solving skills (Agnew, 1992). According to Agnew, individuals with these coping mechanisms are less likely to resort to crime or deviance when exposed to strains. Furthermore, one’s peers opinions towards (or against) deviance can have an effect on an individual’s tendency to turn to crime; with repeated exposure to strain, the individual is more likely to be involved with friends in criminal acts (Agnew, 2006). Recently, GST research has examined the level of exposure to strains and the changes in criminal behavior as a result of the change in strain, as well as the extent and type of coping mechanisms available to individuals (Eitle, 2010; Slocum, 2010). Eitle (2010) studied whether the changes in strains (recent life events and chronic stressors\(^2\)) and coping behaviors could predict the change in criminal activity. The results showed that the change in strain is a significant predictor of criminal behavior. On the other hand,

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1. There are three types of strains: failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli. These will be discussed more in Chapter 2 and 3.

2. The terms “stressor” and “strain” are used somewhat interchangeably in the GST literature. This is discussed more in Chapter 2.
Slocum (2010) reported that negative life events were not significantly related to drug use but that negative emotions and poor self-discipline are important predictors of continuing substance abuse.

Unfortunately, most studies have not clearly tested or proven that there are relationships among the three strains, negative emotions, and diverse coping behaviors, which are all factors which are hypothesized to be holistically associated in GST.

**Study Importance**

GST was intended to cover many forms of deviance. However, the theory was developed to focus primarily on Western culture and adolescents. This present study intends to add to the current literature by focusing on adult police officers in Asian society. While Western cultures rely heavily on individualistic goals, strains in Asian societies, and the emotions generated from these strains, are more likely to be community oriented (Moon & Zager, 2007). Recently, Agnew (2015) proposed that GST needed to be changed in order to better explain crime in Asian societies. The societal and cultural differences in Asian and Western countries produce different strains and corresponding responses. Thus, in order to improve the strategies available to deal with strains, it is imperative that cultural norms and beliefs be taken into account. Common solutions to stress for police officers in Western societies may have little significance in Asian societies due to the difference in the cultures and the resulting stress (Hobfoll, 1998). Therefore, research should consider the importance of the cultural and environmental perspectives in stress, which occurs as a result of an individual's assessment process and is dependent on social or cultural norms and standards (Hobfoll, 1998).
Additionally, GST, as developed by Agnew, has mostly focused on adolescent delinquency. As time goes on, it is inevitable that GST will be extended to adult populations, which, due to increased social and legal responsibilities, are exposed to stronger, longer, and more frequent stressors. (Arter, 2007; Karasek & Theorell, 1992). Furthermore, adults having previous acquaintances with delinquent behavior patterns will find it more difficult to maintain their own respect for the law (Benson, 2012; Warr, 1998). Because adults may respond to specific strains with different types of deviance compared to juveniles, it is imperative that adult populations garner more attention in the application of GST. Most importantly, few studies, until now, have examined police misconduct for the purpose of testing GST. This study will add to the GST literature by shedding light on the strains on adult police officers and their types of deviance.

Finally, this study is significant because it tests all three strains (i.e., failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli) suggested in Agnew’s GST. Few previous studies have incorporated all the major strains and negative emotions presented by Agnew (1992) in one model. This is due to use of existing data without collecting data for the specific purpose of examining GST (Agnew, 2001). In addition, very few studies have considered the mediating effects of negative emotions other than anger, and those that did obtained mixed results. Furthermore, few studies have examined the moderating effects of the diverse conditioning variables (i.e., coping strategies) that Agnew mentioned in his publications. Studying the relationship between all three strains, affective emotions and conditional variables (Agnew’s coping strategies) will provide in-depth findings about adult police officer misconduct in Asian society.
Plan of Study

The purpose of this research is to apply GST to police misconduct, especially in South Korea, because GST may be broadly applicable to different populations and diverse delinquencies originating from strains. This study will utilize all the conditioning variables from the propositions established by GTS, while also examining how police misconduct has been studied and whether this theoretical approach could further explain police misconduct. Therefore, this study will expand on prior studies and their results, and also present implications and future directions for using GST.

Chapter 2 will focus on stress, classical strain theories and GST. It starts by providing the basic research of stress theories in order to examine what stress is and how stress influences human behaviors and emotions from both the biological and sociological perspectives. This section is essential for understanding how sociologically-oriented strain theories formed the foundation for GST. Agnew acknowledged that GST employs sociological and psychological concepts to explain strain and crime (Agnew & Brezina, 2010). Therefore, it is important to understand stress theory and the relationships between stress, emotion and coping mechanisms.

Chapter 3 will provide the literature review for Agnew’s GST and it will discuss the empirical research that has been conducted on stress and police misconduct.

Chapter 4 will examine the history of the South Korean police culture and highlight the general cultural differences between Western and Asian cultures. It has been shown that cultural and environmental factors influence stress, emotions and coping mechanisms (Hofstede, 1984; Matsumoto, 2006).

Chapter 5 will examine specific research questions and hypotheses developed from the findings of numerous scholars and it will discuss a methodology for analyzing
these hypotheses. Chapter 6 will present the methodology in terms of data collection and the forms of data analysis. After providing the empirical results of this study in Chapter 7, Chapter 8 will summarize the major insights and knowledge, political and theoretical implications, limitations, and recommendations for future research.
CHAPTER 2
THEORY

Stress-Related Theory

What is Stress?

The following sections present various interpretations of the words “stress” and “stressor.” Stress is when an organism’s ability to maintain its dynamic equilibrium is being challenged by outside and inside stressors (Chrousos, 2009). Stressors may be present as stimuli on the outer surface of an individual creating a crucial threat to present working capabilities (Wheaton, Young, Montazer, & Stuart-Lahman, 2013). Stress arises in situations where these outside or inside challenges are threatening or conceived as dangerous. In the biological stress model, it is a reaction of the body — a condition of physiological caution in the vicinity of stressors (Wheaton et al., 2013).

Scholars have defined stress in different ways. Selye (1956) defined stress as a condition where humans respond to changes in their normal balanced state by making changes in the body’s structure and chemical composition. While studying a variety of diseases in patients, Hans Selye (1976) determined that the body had a nonspecific stress response pattern to any kind of external challenge. He later used the term to refer to the exertion a living organism uses to adjust to harmful stimuli – the General Adaptation Syndrome (GAS) (Selye, 1952), which has three stages: the acute alarm stage (i.e., the body prepares for action by gathering its energy resources); the chronic stage (i.e., the body prepares for action by gathering its energy resources); the chronic

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1 “Stressor” in stress literatures has a similar meaning to “Strain” in GST theoretically. Agnew (2006, p. 4) and Agnew and Brezina (2010, p. 101) define that strains are “events or conditions that are disliked by individuals.” The terms, stressor, strain, and stress are used interchangeably by researchers (Agnew, 2001).
resistance stage (i.e., the body copes with the alarm stage and seeks a return to homeostasis); and a chronic exhaustion stage (in which energy resources are exhausted and the body is unable to return to homeostasis).

According to the definition put forth by McEwen (2000), stress may be characterized as a genuine or interpreted risk to the physiological or mental trustworthiness of a person and thus may cause physiological and/or behavioral reactions. Chrousos and Gold (1992), on the other hand, claim that stress is characterized as a disharmonious condition, or debilitated homeostasis.

Levine (2005) conceived of stress as a composite, multi-dimensional condition with three segments: input, when the external challenge is seen and evaluated; processing of the stressful situation; and output, or the stress response. The three segments interface through complex automatic feedback mechanisms with the main goal to restore homeostasis through behavioral and physiological adjustments (Levine, 2005).

**Behavioral and Biological Consequences of Stress**

Stress reactions have biological consequences on the organism: psychological and hormonal changes, as well as behavioral. Humans behave a certain way to maximize or minimize further hazards of mischief or illness. For instance, a person may partake in risk-taking behavior that maximizes hazards, or engage in careful behavior that minimizes hazards, (McEwen & Seeman, 1999).

Our brain and body employ several countermeasures, called stress responses, for adapting to environmental changes. According to Karatsoreos and McEwen (2011), they are vital for life and help organisms and individuals adjust to the environment. In some cases, the physical results of constant stress may be more detrimental than the
behavioral outcomes. For example, heightened levels of corticotropin-releasing hormone and/or stress-system anomalies have been observed in behavioral and neuropsychiatric disorders, such as hypothalamic oligomenorrhea and amenorrhea, low-fertility or infertility, excessive exercise, depression and anxiety, post-traumatic stress disorder in children, dietary problems and chronic alcohol addiction (Charmandari, Tsigos, & Chrousos, 2005; Chrousos & Gold, 1992).

The type of emotion (e.g., anger versus anxiety, guilt, pride, etc.) and the degree of emotion (involvement and physiological change) depend on how the person responds to his/her psychological needs and how these emotions have become habitual when similar stressors are experienced (Lazarus, 1993). According to Wheaton et al. (2013), an individual’s management of stressors, along with assistance from various social support systems, may allow him/her to effectively deal with challenges (Wheaton et al., 2013). However, while proper exposure to stressors and social support can improve his/her ability of to cope with stress, the stress itself can still cause unpleasant emotions, such as anger, anxiety, sadness, envy, jealousy, fright, guilt, and shame (Lazarus, 1991). These strong negative emotions are essential, however, for developing coping mechanisms for future behavior.

**Stress and Emotion**

The human reaction to stress, which includes negative emotional response and coping mechanisms, has always been an intriguing subject for researchers (Cannon, 1932; Lazarus, Averill, & Opton, 1974; Selye, 1956). Lazarus (1991, p 6) delineates emotion as a “complex, patterned, organismic reaction to how we think we are doing in our lifelong efforts to survive and flourish and to achieve what we wish for ourselves.” Emotions have a huge impact on our thoughts, behavior and social relationships.
Negative emotions are recognized as the center of psychological stress, while positive emotions frequently restore and sustain damaged elements of the psyche (Lazarus, Kanner, & Folkman, 1980). Emotions are constantly in a dynamic state, due to the fact that experiences with the environment and other individuals always change.

Chronic stress can easily lead to negative emotions, or to a harmful evaluation of oneself, when an individual is placed in a detrimental environment (Levenson, 1994). Negative emotions emerge from diverse environments and varied interpretations of them. Research has shown that these negative emotions, as well as depression and anxiety, are significantly related with perceived stress (e.g., Bergdahl & Bergdahl, 2002; van Eck & Nicolson, 1994). Anger emerges from a wide variety of circumstances, including failure to achieve a positive outcome or being the object of harsh criticism, while depression is typically focused around an apparent loss of, or absence of, valuable stimuli (Frijda, 1987; Roseman, Spindel, & Jose, 1990; Smith & Lazarus, 1990).

**Anger**

Anger is a unique emotion, which produces strong social effects, as well as personal effects on the individual feeling the anger. Unlike guilt, anxiety, jealousy, envy or sadness, anger has two potential outlets: anger directed at another individual and self-directed anger, in which the individual sees his/herself as an external object (Lazarus, 1991).

In the 1950s and 1960s, aggression spurred by anger was thought to be the result of a derailed goal: anger results from frustration, which leads to aggression (Lazarus, 1991). In this view, anger is seen as an emotional response, not a necessary
condition for aggression (Novaco, 2007). However, this view is not unanimous. Berkowitz (1990, 1993) stated that anger and aggression, though they run parallel courses, are distinct entities that can be produced separately by "negative affects."

Anger, defined as agitation or distress activated by deleterious circumstances, fluctuates in severity, period of experience, and outward manifestation (Novaco, 2007). When regarding the dynamics and treatment of anger or aggression, it is important to understand anger escalation (Aggleton & Mishkin, 1986; McGaugh, 2003). If the individual encounters "positive feedback," which, for example, could be an angry response from an outside party, the initial angry reaction to the threat can escalate. The angry response from the outside party is seen as justification of both the anger and its escalation. This justification of anger through cognitive networks not only prolongs the initial discord, but also increases the likelihood that the individual will experience new quarrels.

**Anger and depression**

How do emotions such as anger and depression coexist? Many studies have found that anger and depression occur simultaneously (Fava & Rosenbaum, 1999; Koh, Kim, & Park, 2002; Posternak & Zimmerman, 2002), as do hostility and depression (Scocco, Meneghel, Buono, & De Leo, 2001). Feeling diverse emotions in the same circumstance is referred to as “intra-individual variety” (Lazarus, 1991). Specifically, Koh et al. (2002) found that depressive disorder patients demonstrated a significantly higher level of anger than their control group counterparts. According to Lazarus (1991), depression often precedes externally-directed anger. For example, the negative emotion of depression can cause frustration or jealousy, which can then prompt anger.
Emotion and Coping

Stress is not universally harmful, however, and many who undergo chronic stress manage the difficulties extremely well. In many cases, people who undergo stress derive benefit from the situations that gave rise to the stress. Here, the ability to cope is key to handling stress. (Moskowitz, 2001). Lazarus (1991, p. 112) described coping as "cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person."

Even though a great deal of research has been done on coping during acute/short-term stressful events, studies of coping with chronic stress have been limited (Aldwin, 2007; Gottlieb, 1997). When individuals are faced with stressful situations, they draw on secondary control strategies that focus on coping rather than solution-building or problem-solving. The strategies differ depending on the circumstance and resources available to the individual. For example, impoverished groups, women, unmarried persons, and minorities generally display a reduced capacity for coping (Thoits, 1995; Turner & Roszell, 1994) which results in higher risks of poor mental and physical health.

According to Thoits (2010), there are three secondary control strategies that help an individual cope: a sense of self control, high self-esteem, and support by social organizations and acquaintances. A sense of control or mastery over life is exhibited in individuals who have a proactive approach to life events and who do not feel as though things simply “happen” to them. This sense of control generates high self-esteem (e.g., the high value that an individual places on him/herself) and motivates the individual to pursue problem-solving solutions. Social support can provide not only emotional, but also practical and informational, assistance when needed. The perceived availability of
social support can be just as important as the delivery of the needed social support. This social support, real or perceived, alleviates psychological and physiological distress (Kessler & McLeod, 1985; Pearlin, Menaghan, Lieberman, & Mullan, 1981; Taylor & Stanton, 2007; Uchino, 2004).

Since stress can lead to detrimental physical and behavioral consequences, it is important that individuals utilize coping strategies. Coping uses two means for reducing these negative consequences problem-focused coping, which involves dealing with a problem directly; and emotion-focused coping, which aims to resolve negative emotions caused by the problem (Lazarus & Folkman, 1984). While research literature makes a distinction between problem-focused coping and emotion-focused coping, in practice the difference is not always obvious. This is because in addressing the problem, the individual is also addressing the root of his/her negative emotion.

The stress and coping behaviors empirically, and conceptually, that have been examined in much of the past research include problem-focused/emotion-focused coping, cognitive-behavioral coping, approach-avoidance coping, and engagement-disengagement coping (Lazarus & Folkman, 1984). Even though there has not been consensus with the varied dimensions of stress and coping (Holahan, Moo, & Schaefer, 1996), Lazarus and Folkman (1984) proposed that there are three main components to the stress-and-coping process.

The first component is evaluation of the stress, which, in turn, produces the second phase, the emotional response. The emotional element of the process induces coping and then initiates a return to a reappraisal of the situation, which is the third phase. Because the entire process can happen very quickly, it is difficult to extricate the
causal direction of appraisal, coping, and emotion. The reliability of the causal links hinges on the coping response, the severity of the stressful event, and the time elapsed before measurement. According to Carver and Scheier (1994), emotion is likely to influence coping, which in turn influences the subsequent emotion.

Generally, problem-focused coping produces a low level of negative emotions (Amirkhan, 1990; Carver, Scheier, & Weintraub, 1989; Moskowitz, Folkman, Collette, & Vittinghoff, 1996) and a high level of positive emotions (Blalock, DeVellis, & Giorgino, 1995). On the other hand, strategies which avoid coping are linked with greater negative emotions (Amirkhan, 1990; Carver et al., 1989) and decreased positive emotions (Folkman & Lazarus, 1988; Revenson & Felton, 1989).

**Summary**

In all, “stress” has been examined by many scholars, subsequently rendering many definitions. However, regardless of definition, stress causes behavioral and biological consequences, such as dietary problems, alcohol addiction and cardiovascular conditions (Charmandari et al., 2005; Chrousos & Gold, 1992). More importantly, stress causes many negative emotions, such as depression, anxiety, and anger, which lead to the use of coping strategies, both positive (problem-focused and emotion-focused) and negative to relieve the stress. Unfortunately, negative coping strategies, when reinforced, can lead to delinquency.

**Classical Strain Theory**

Before studying GST, it is important to understand the classical strain theories. Strain theories are different from theories which argue that criminal behavior results from biological factors, psychological factors, and other factors that are inherent in an
individual. The following sections will cover various classical strain theories and their development as well as criticisms of strain theory.

In his 1897 study of anomie (normlessness) and suicide, Emile Durkheim focused on stress at the societal level and reported that behavior in a society is a result of societal and systemic stressors. Merton (1938) reworked the ideas of Durkheim decades later and in his revisions he put forth anomie theory in an attempt to explain crime in the United States. Cohen (1955) and Cloward and Ohlin (1960) took Merton's advancements and used anomie/strain theory as a lens for viewing subcultural delinquency (e.g., gang culture).

In spite of numerous criticisms relating to the supposed deficiency of strain theory for explaining delinquent behavior (Bernard, 1987; Hirschi, 1969; Messner & Rosenfeld, 1994), strain theories reemerged in the 1990s. Until this revival, classic strain theories (Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938, 1968) faced possible abandonment. However, strain theories once again became a dominant presence in criminological research thanks to the introduction of General Strain Theory (GST) by Robert Agnew (1992).

**The Anomie Theory of Durkheim**

Strain theory links pressures and strains, originating from the interactions between culture and social structure, to various forms of social delinquency. Specifically, as put forth in the work of Durkheim (1897/2006), a lack of social regulation (normlessness) can lead to an anomic society, which, in turn, can explain an increase in suicidal behaviors.

The effects of normlessness on suicide can be illustrated by the example of an individual's reaction to an economic crisis. The norms by which an individual is shaped
and educated fail to adapt to the changing norms because of the reduced availability of means. The individual, still adhering to previous norms, fails to adapt to the new norms and cannot meet his or her needs. In this way an anomic society results. The inability of the individual to meet his or her needs greatly increases the chance of suicide.

In later papers, Durkheim developed this theory by studying how wealth can also lead to an anomic society. According to Durkheim (1897/2006), there are two types of needs that individuals experience: physical needs, which include all things material, such as food and shelter; and organic needs, which encompass all things metaphysical, such as love, the development of relationships, and the desire to pursue higher social status. Durkheim argued that these needs know no limits because humans have the ability to reflect on their situations. This "reflection" causes the individual to seek the next level, no matter how satiated the previous level had left him or her; the more a person has, the more a person wants (Durkheim, 1897/2006). With wealth comes the individual's attempt to satiate a seemingly limitless thirst. If there is nothing to check the pursuit of wealth, the individual quickly becomes discontented.

Regardless of whether social changes are the result of poverty or prosperity, the state of anomie caused by normlessness can push an individual to suicide (Cullen, 1984). Durkheim (1897/2006) claimed that an individual in a disturbed state would have a tendency to commit suicide because s/he feels pain if his or her needs cannot be met. Thus, the person's pursuit of an unachievable goal leads to continuous unhappiness. For human happiness, the individual's needs should be constrained by social consciousness as a regulatory function. If society is disturbed by an economic crisis, the
prior standards will change and individuals will be “reclassified.” During that period, society cannot regulate human aspirations, leading to stress and pain.

**The Strain Theory as Developed by Merton**

Like Durkheim, Merton attempted to explain social problems with sociological theory. However, Merton reworked Durkheim’s anomie theory, and, in doing so, departed from the original work in several important ways. Merton (1968, p. 188) argued, “my central hypothesis is that aberrant behavior may be regarded sociologically as a symptom of dissociation between culturally prescribed aspirations and socially structured avenues for realizing these aspirations.” This differs from Durkheim's theory, which related anomic conditions and suicide to the deterioration of social regulation. Instead of focusing on a breakdown in social regulation, Merton put the emphasis on the difference between cultural aspirations and the availability of socially structured methods.

Another point of distinction is the definition of anomie. Durkheim thought of anomie as a periodic state of society without regulations or norms — normlessness. However, according to Merton (1968), anomie is a perpetual breaking-down of cultural structure, specifically caused by a disjunctive situation wherein cultural norms and goals and an individual’s capabilities, which are socially structured, do not behave in accordance with each other.

Merton developed his theory in an adaptable way that could suit a variety of deviances (Cullen, 1984). In doing so, the revisions by Merton (1938) advanced Durkheim’s anomie theory to explain deviant adaptations in the United States. According to Merton, the roots of these deviant adaptations are the unequal social means of acquiring the cultural ends, thus creating strain. In American society, where
there are particularly strong goals for financial success, and a weak emphasis on the means of how the goals are achieved, rebellion adaptation to strain is prevalent in the lower class and minority groups (Merton, 1938). This imbalance, according to Merton, is the cause of greater criminality in the United States compared to other countries that do not exhibit such a single-sided emphasis on attaining cultural goals.

Merton asserted that it is this imbalance which causes discontent and strain on certain people and which leads to deviant behaviors. Merton is criticized for focusing on crime in poor urban areas (Akins et al., 2010) and for not commenting on the presence of deviant behavior as a part of a subculture and the use of different means to achieve different ends (Cloward & Ohlin, 1960). Nonetheless, Merton’s work is useful for micro- (Agnew, 1985) and macro-level studies (Bernard, 1987; Messner, 1988).

The Status Frustration Theory by Cohen

Cohen (1955) focused on a subculture of lower class adolescent males in order to emphasize that stress was caused by conditions related to structure and culture, which often resulted in deviant coping. However, the perspective of Cohen differed from that of Merton in that the former focused more on how lower class males could not gain status and acceptance with respect to education and occupation. The failure to acquire status and acceptance in a society often causes frustration and this often helps to produce a delinquent subculture. Their new standard may be contradictory to middle-class expectations, but will help to produce a satisfying solution for adolescents who deal with status and social strains.

Cohen argued the notion that “status frustration” is a result of an individual’s difficulty to gain respect from “one’s fellows,” or peers (1955, p.65). The research and observations made by Cohen focused on the status strains that exist within a lower-
class group along with any interconnections between their personal strain, delinquent behavior, and the delinquent subculture as a whole that lead to different methods of adaptation for individuals.

**The Theory of Different Opportunity by Cloward and Ohlin**

This theory helped to consolidate aspects of anomie, differential association, and social disorganization (Akers & Sellers, 2009). Cloward and Ohlin (1960) proposed that an individual’s environment and differential opportunity subculture lead to deviant coping, specifically joining adolescent gangs. The authors said that Merton’s statement about the gap between a person’s goals and his/her capability to achieve these goals creates strain, and this leads to delinquency. On the other hand, they argued that Merton did not consider that not all individuals took advantage of an illegitimate opportunity for success. Cloward and Ohlin (1960) argued that the location of the individual on a legitimacy spectrum will affect whether or not the individual chooses to adapt with deviance (Akers & Sellers, 2009). The authors believed that the legitimate and illegitimate opportunities are disproportionally distributed and that lower class groups have more illegitimate opportunities for success.

Cloward and Ohlin (1960) claimed that individuals who blame the unjust system instead of themselves for their social strains develop a process of alienation and are pressed to change themselves rather than society. They then form a delinquent subculture because they are unable to adapt to their situation.

The theory of Cloward and Ohlin (1960) argues that a lack of legitimate means in developing or achieving cultural goals leads to adjustment problems or strains for lower-class male adolescents. Many theorists (Akers & Sellers, 2009), have proposed that a
lack of legitimate educational and occupational means likely leads to higher rates of delinquency for male adolescents in low-class neighborhoods.

**Criticisms of Classical Strain Theory**

Critics of classical strain theory contend that middle class delinquency is not explained by classical strain theory. Agnew (1992) stated that these theories focus only on monetary success and social status and overlook other factors within social groups that may contribute to, or hinder, goal achievement. He explained how this limited focus does not fully explain why only some individuals who are affected by strain become delinquents.

Empirical tests have failed to support the classical strain theory’s premise that strain can be measured in the disjunction between aspirations and expectation (Agnew 1992; Agnew, Cullen, Burton, Evan, & Dunaway 1996; Baron, 2006). However, Agnew (1992) changed some assumptions from classical strain theory and suggested that strain could be better measured by the gap between expectation and actual achievement and that goal blockage leads to frustration, which generates delinquency.

Highlighting these issues are three criticisms of classical strain theory (Cloward & Ohlin, 1960; Cohen, 1955; Merton, 1938).

The first criticism centers on conceptual problems. While strain theorists argue that the discrepancies between goals and means create strains that lead to deviant coping behavior, Kornhauser (1978) stated that, due to a person’s natural desire to acquire more, there is no need for a societally constructed motivation to spur aberrant behavior. She criticized the strain theories of Merton, Cohen, Cloward and Ohlin by claiming they do not fit with the anomie theory of Durkheim. From a position of control theory, she argued that Durkheim thought that anomie (failure to regulate the goal) was
an effect of strain originating when there is no restraint to suppress endless human behavior and passion. However, other strain theorists linked anomie (failure to regulate the means) to normlessness as a cause of strain, concerning means. She also refuted that Merton’s adaptation typologies violate the universalism assumption in social structure.

The second, and most detrimental, critique is lack of empirical support. In empirical studies strain is defined as the disparity between aspiration/expectation in educational or prestigious attainment. However, in these studies there has been little support that those suffering the largest discrepancies in aspirations and expectations commit more criminal acts (Agnew, 1984; Burton, Cullen, Evans, & Dunaway, 1994; Hirschi, 1969; Kornhauser, 1978). An argument put forth by Bernard (1984), and upheld by Farnworth and Leiber (1989), maintains that educational aspirations are a means to greater monetary success, not ends in and of themselves. For that reason, Bernard argues, measuring the discrepancies between aspirations and expectations concerning monetary success is the more theoretically consistent method. For example, when studied, delinquent youths do not appear to note differences, great or small, in their educational and occupational aspirations and expectations (Hirschi, 1969). Also, there appears to be an inability in individuals to cease deviant coping once the gap between aspirations and expectations is narrowed.

Furthermore, classical strain theory only attempts to explain delinquent behavior in a narrow context (Agnew, 1985; Akers & Sellers, 2009). In the cases of Merton (1968) and Cloward and Ohlin (1960), the focus is on financial achievement. Cohen (1965), however, addresses strain theory in the context of middle-class status. Others
(Agnew, 1985; Elliott, Ageton, & Canter, 1979; Elliott & Voss, 1974; Quicker, 1974) have found that different goals prevail in differing demographics. For example, youths are not limited to the goals stated by classical strain theorists, but instead value academic achievement, popularity, etc., which not be considered long-term goals.

As a result of the aforementioned problems concerning classical strain theory approaches to aspiration/expectation, namely the limited variety of goal/means discrepancies, classic strain theory restricts its explanation to delinquent subculture and lower class delinquency. As a result, classic strain theory handles social class as an impediment to the individual. Agnew (1991), however, holds that other barriers, like personality, may be present. Therefore, classical strain theory cannot address the nature of middle-class crime.

Merton's (1938, 1968) anomie theory has been said to be unverifiable for the individual because it is a structural theory that is based on the social organization of a community (Bernard, 1987; Burton & Cullen, 1992; Messner, 1988). But, according to Bernard (1987), the anomie theory is susceptible to falsification by data collected at a macro level (Bernard, 1987). Prior studies of Merton's theory, according to Bernard (1987), have used individual studies to explain anomie and strain. The presumptions of these studies have placed strain and anomie in social structures as components. Overall, however, there has been weak empirical evidence of support for anomie theory in terms of macro-level studies with structural variables such as class and race (Akers & Sellers, 2009).

Furthermore, Messner and Rosenfeld (1994) stated four criticisms of Merton's (1938, 1968) assumptions: 1) Merton placed monetary achievement as the main factor
in economic success/the American Dream; 2) He considered class as the root of crime; 3) He incorrectly assumed social reform would be a practical solution while failing to acknowledge racial policy implications; 4) He did not define his version of anomie, which is strikingly different from Durkheim's.

Cohen (1955) and Cloward and Ohlin (1960) have not escaped similar scrutiny. Empirical research has not been able to make the connection between unequal access to means and delinquent subcultures, like gang membership (Short & Strodtbeck, 1965). Cloward and Ohlin's three types of delinquent subcultures have also been scrutinized because of empirical investigations' inability to identify different delinquent subgroups based on community structures (Bernard, 1987; Akers & Sellers, 2009). The inability to identify "retreatist" adolescent groups is problematic (Bernard, 1987). Finally, Cloward and Ohlin's finding that subcultural delinquency is linked to the discrepancy between aspirations and expectations was called into question by Bernard (1987), who stated that delinquent behavior is related to class position.

**General Strain Theory**

GST has been one of the most popular theories in academic fields since it was proposed by Agnew in 1992. Drawing from previous strain theories, and attempting to address their limitations and weaknesses, Agnew amended the assumptions of classical strain theories using a social-psychological approach rather than the cultural and structural perspective as used by the classical strain theorists. Agnew (1992) identified strains other than goal blockage and claimed that strain is caused by relationships wherein an individual is not receiving the treatment s/he feels is deserved. In this type of relationship, an individual tends to constantly experience events and conditions that are unfavorable to him/herself (Agnew, 2006). This constant exposure to
unfavorable events or conditions creates strain. In particular, GST employed the justness and emotions to explain the cause of delinquent behavior and the type of strain leading to delinquency. Additionally, Agnew examined coping behaviors, such as social support, self-efficacy, differential association, low constraints, self-esteem, and religiosity.

Agnew (2006) argued that diverse strains cause negative emotions. Then individuals in such strains and negative emotions are pressed to cope by committing crime. In other words, Agnew explained that negative emotions — mainly anger and related emotions — are caused from negative relationships with others (strains) and these negative emotions (negative stimuli) push the individual to cope with these strains through crime. Crime allows individuals to reduce or escape from strain and seek revenge against those who have mistreated them, or alleviate their negative emotions (Agnew, 1992, 2006). For example, adolescents can escape strain by leaving an abusive parent, or stealing bread to cope with pangs of hunger. Revenge can manifest as an assault on those who have harmed the individual. Drug abuse is an example of how individuals alleviate negative emotions, such as anger and depression.

**General Types of Strains**

GST focuses on three types of negative relationships, or strains;

- Failure to achieve positive goals, such as wealth, social status, and autonomy;
- Removal of positive stimuli, such as the loss of a loving partner and death of family members or close friends;
- Presentation of negative stimuli, such as physical or verbal insults.

Agnew (1992) claimed that these three types of strain increase the possibility of experiencing negative emotions (e.g., anger, fear, and depression). Following the
negative emotions is generally an action that is, to the individual, corrective: stealing, revenge, drug use, etc.

**Failure to achieve positive goals**

This first strain follows Merton's (1938) original theory closely, but Agnew contributes to the theory using empirical strain literature. In doing so, Agnew provides a more complete grasp of goal blockage as the root of strain. Agnew takes his analysis a step further as well, and contends that failure to achieve positive goals can be subdivided into three separate categories, all of which he believes are responsible for delinquency (Agnew, 1992, pp. 51-53).

The first subtype, "the disjunction between aspirations and expectations/actual achievements," deviates from the original strain theory only because Agnew did not limit goals to monetary goals. Instead, he added immediate goals as an addendum. The second subtype, "the disjunction between expectation and actual achievements," highlights the importance of differentiating aspirations and expectations. Aspirations, as mentioned in subtype one, are idealistic and originate from the individual's culture. Expectations, on the other hand, are characteristically more realistic and are generated from "past experience and/or from comparison with referential or (generalized) others who are similar to the individual" (Agnew, 1992, p. 52). As a result, discrepancies in expectations and actual achievement cause far greater strain. Finally, the third subtype, "the disjunction between just/fair outcomes and actual outcomes," places importance on the individual’s expectations that fair rules will be adhered to, guaranteeing predictable, and just, results for effort. Consequently, when an individual feels slighted by unfair/unjust practices, the individual is more likely to seek recompense in the form of
more rewards, a reduction of effort, a reduction of others’ rewards, or an increase in others’ effort (Agnew, 1992).

While Agnew does not argue that positively valued goals are measured in monetary achievement, he holds that other variables, like fairness, are important, as well. "Economic status is the factor that most distinguishes high-crime from low-crime communities," but status and respect, along with justness and fairness, play a major role as well (Agnew, 1999, p. 130). Justness and fairness, according to Agnew (1999), are frequently associated with class, race, and ethnic discrimination. Status and respect are usually connected with income, education, occupation, and race.

**Removal of positive stimuli**

Drawing on aggression and stress literature, Agnew (1992) claims that the removal of positive stimuli, or positive outcomes, can be more harmful than failure to achieve the goal. Bandura (1973) and Zillmann (1979) propose that goal blockage is not a good indicator of aggression, since the person has never experienced the goal. The loss of this potential reward, especially loss of a family member or friend (Akers & Sellers, 2009), or expulsion from school, can possibly cause greater strain and desire to replace the loss. Bandura (1973) and Van Houten (1983) reported experimental data indicating that removal or reduction in positive reinforcement often leads to aggression. Other examples highlighting the removal of positive stimuli include the loss of a boyfriend or girlfriend, moving to a new school or neighborhood, parental divorce, suspension or expulsion from school, and sudden unemployment (Agnew, 1992). To replace the positive stimuli, whether the removal is actual or anticipated, the individual may turn to delinquency, seek revenge, or use drugs to compensate.
Presentation of negative stimuli

Negative stimuli, like child abuse, victimization, physical punishment, poor parental or peer relationships, negative school experiences, and/or verbal threats/abuse have been identified by Agnew (1992) as linked to delinquency. While these are examples of negative social stimuli, non-social stimuli (e.g., natural disasters) are also possible. As with the other two sources of strain, individuals may attempt to alleviate the strain by reducing it with drugs/alcohol or by seeking revenge against those who cause it.

Agnew (2006) argued that any of the three strains outlined above may reduce social control. The loss of social control can lead to the learning of crime, which is fostered in the social environment, and potentially leads to characteristics favorable to crime. For example, teenagers who reported dissatisfaction with stern and punitive parents often associated with other disassociated youths, who treat each other poorly or perform badly in school. The culmination of these negative relationships is that the disaffected individual ends up unemployed or having a job with poor conditions and/or low pay.

GST, it is important to note, does not place strain as the cause of deviant behavior. The pressure caused by strain creates an urge to reduce strain, and deviance springs from this urge to reduce strain (Armstrong, Lee, & Armstrong, 2008). Such deviant acts as theft or drug abuse aim to reduce the negative effects of perceived strain (Agnew & White, 1992; Broidy; 2001; Ganem, 2010; Parnaby & Leyden, 2011; Piquero & Sealock, 2010). Also important to note is that strain can accumulate over time (Agnew, 2001; Agnew & White, 1992; Mazerolle & Piquero, 1997), which, theorists
believe, is an important factor for explaining the influence of stress on deviance (Agnew, 2001).

**Alternate strains**

Although Agnew (2006, pp. 71-74) identified three main types of strains, he elaborated on the specific strains that may cause crime. Strains on youth include rejection by parents, inconsistent supervision, child abuse, bad experiences in school, and mistreatment by peers. For adults, strains are work in the secondary labor market, persistent unemployment, and marital problems. Both juveniles and adults are affected by failure to achieve selected goals, including thrills/excitement, high levels of autonomy, masculinity, financial concerns, criminal victimization, poor community environment, homelessness, and discrimination associated with race, ethnicity, and gender.

Individuals can also experience strain second-hand from vicarious or anticipated events. The loss of a job by a family member, or a friend who suddenly becomes ill, can spur vicarious strain and allow negative emotions to manifest when the individual empathizes with the affected individual. Furthermore, the abuse of a peer increases the occurrence of delinquency in an individual, because it fosters the urge to retaliate or prevent future infractions through potentially illicit means (Agnew, 2002). Anticipated strain, however, is less likely to create delinquent behavior, but does increase overall strain, which can drive criminal acts. Residents of high-crime areas can reasonably expect to be made targets; ergo an individual may choose to carry a firearm, thus facilitating crossing the legal/illegal boundary when faced with a quandary (Agnew, 2006).
Strains Conducive to Crime

Strain affects everyone differently (Agnew, Brezina, Wright, & Cullen, 2002; Broidy & Agnew, 1997; Slocum, Simpson, & Smith, 2005). Agnew (1992, 1995, 2001, 2006) claimed that experiencing a strain can make an individual feel bad, therefore causing him or her to experience a range of negative emotions which are proportional to the magnitude (the extent of strain), duration (the length of time one experiences strain), recency (the timing of the strain), and clustering (the grouping together of several stressful events) of the strain. Events that are not only great in magnitude, but also recent, clustered and lasting in duration, are more stressful.

Events that are great in degree, or magnitude, Agnew (2001) states, drive delinquency with greater frequency. A minor financial error, for example, is of less magnitude than a grave need for money. The severity of the situation, if perceived to be of high magnitude, influences the cost-benefit analysis of criminal behavior, making delinquency more palatable because of the perceived benefits at a reduced cost (Agnew, 2001). A youth, for example, that does not receive affection from his/her parents does not run the risk of losing that affection if the youth commits delinquent acts. Also, strains of severe magnitude that persist chronically create irritation, which increases the chance of reacting negatively to other strains. Major strains, therefore, put an individual at risk for criminal behavior because of reduced social control.

Unjust strains also lead to crime (Agnew, 2001). According to Agnew (1992), the concept of unjustness is a subcategory of the goal blockage strain. The unjust strains are uniquely troublesome because of the anger they elicit. If an individual feels partly to blame for the strain, s/he is less likely to suffer the same level of negative emotions as a person who feels they were unjustly slighted. Victimization occurs when people suffer
from unjust strains, which are often at the hands of a family member or friend. Unjust strains are especially problematic because of their ability to weaken social ties. Agnew (2001) claims that over time, these strains begin to control an individual’s core values, which include his or her goals, needs, activities, and identities.

Also, there is a need to differentiate subjective and objective strain. GST emphasizes subjective interpretations of strain. According to Agnew (2001), objective strain is unpopular across a swathe of individuals. Examples include structural disadvantage, unemployment, deprivation of food and shelter, and assault. The predictable nature of these strains has allowed researchers to predetermine and examine objective negative events. In subjective strain, however, great importance is placed on whether the strain is unjust or just, which is highly dependent on interpretation and emotion. Examples of subjective strain are divorce and familial death. In the event of subjective strain it is important for researchers to ascertain how the individual interprets the strain, not just the strain itself (Agnew, 2001).

**Chronic Strain**

Agnew (2006) suggests that chronic strain reduces the ability of an individual to successfully cope in a legal way (Agnew, 2006). The author also claims that chronic strain contributes to emotional traits, which tend to result in certain emotions and, moreover, negative emotionality conducive to crime (Agnew, 2006; Agnew & Brezina, 2010). Prolonged strain, and thereby prolonged negative emotions like anger, frustration, and/or depression, increases the chances that a person will react abnormally to strain.

According to researchers, trait-based anger, versus state-based anger, leads to more incidences of angry reactions to strain (Hay, 2003; Mazerolle & Piquero, 1997;
Mazerolle & Piquero, 1998; Mazerolle et al., 2000). For example, someone who has high trait-based anger is far more likely to have an angry reaction and perceive a strain as intentional, unjust, and coming from an external source (see Capowich, Mazerolle, & Piquero 2001; Mazerolle, Piquero, & Capowich, 2003). Someone who is depressed, however, is more likely to attribute the strain to him/herself.

**Negative Emotions**

**Anger**

Anger, as a negative emotion, is considered to have high potency. As stated before, anger increases an individual's outward reaction, as well as his/her desire for revenge (Hoffman & Spence, 2010), and is usually a response to being treated unjustly (Agnew, 2001, 2006). Therefore, anger as an emotional response is very important in predicting criminal behavior. Studies show that individuals who do not experience high rates of anger are less likely to commit crime (Agnew, 2001; Broidy, 2001; Ganem, 2010).

Anger is also associated with frustration, malicious envy, and jealousy. Malicious envy is differentiated from jealousy, in that jealousy relates to the potential loss of an important relationship to an adversary, while malicious envy arises when people feel “they have the right to what others have” (Agnew, 2006, p. 33). Jealousy includes feelings of suspicion, distrust, and fear of loss, while envy usually includes inferior and hostile feelings (Agnew 2006, p. 33).

Because people experiencing anger are generally not thinking rationally, Agnew contends that an individual's ability to cope in a legal manner is reduced. People feeling anger "tend to attribute malicious intent to the acts of others..." (Agnew, 2006, p. 33).
Adding to this is the tendency of an angry person to ignore the long-term consequences of crime. The need for revenge is also amplified when anger is experienced.

**Depression**

While anger appears to be the emotion most directly related to crime, depression is also linked to delinquency. Other related emotions, like anguish, despair, hopelessness, and disappointment (Agnew, 1992, 2006), along with depression, are likely to increase the chances that an individual will attempt to cope with these negative emotions with drug use or alcohol.

Agnew (1992) differentiates depression from anger by defining anger as an outward-directed emotion and depression as an inward-directed emotion. Outward-directed emotions enable the individual to undergo feelings of power and potency. Inward-directed emotions, on the other hand, leave the individual feeling powerless in the face of an overwhelming situation (Agnew, 2006). As a result, depression, because it is associated with low power, does not lead to as much deviance as anger. When suffering depression, the individual is considerably less likely to make proactive efforts seem impossible, leading to greater substance abuse instead of property or violent crimes (Agnew, 2006).

**Fear and terror**

Fear is typically caused by situations in which people feel they cannot control or prevent an unpleasant event or condition. When fear permeates the minds of individuals, they usually feel strongly inclined to run away or to hide. Therefore, fear is usually associated with types of delinquent behavior that involve running or hiding, such as not attending school or work, drug and alcohol use, and/or avoiding any academic responsibilities (Agnew, 2006).
Frustration

Agnew (1992) writes that frustration, along with anger, derives primarily from the disjunction between expectation and actual achievements and the disjunction between just outcomes and actual outcomes. Furthermore, Agnew (2012) reports that the frustration resulting from goal blockage strains increases the likelihood of crime, especially property crime. He explains that it is not the inability to reach ideal goals that prompts frustration, but rather the disjunction between actual achievements and expected goals.

Emotional Traits and States

Agnew (2006) differentiates between emotional states and emotional traits\(^2\). Emotional state is defined as the exact experience of an emotion, while emotional trait is the general tendency for an individual to experience that emotion (Agnew, 2006). Simply put, state emotions involve the present situation, while trait emotions are more focused in the individual’s personality. Agnew (2006) claims that emotional state should be tested in GST research because it is more influential in driving an individual to commit a crime. Furthermore, the author attributed moderate effects of strains on anger to the usage of the emotional traits for a negative emotion in GST studies (Agnew, 2006). On the other hand, he explains that individuals having high emotional trait are more likely to deal with strains through emotional states.

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\(^2\) It should be noted that the emotional traits in this study are distinct from personality traits and negative emotionality, which are generated from biological and environmental factors working as conditioning variables in GST (Agnew et al., 2002). Emotional traits are general tendencies for feeling certain emotions, other than the actual emotions an individual feels in a situation.
Some research results have suggested that negative emotional traits are caused, in part, by mistreatment from trusted individuals, such as harsh parents, and from living in negative environments that are economically and socially deprived, like inner-city communities (Agnew, 1997; Bernard, 1990; Colvin, 2000).

Recently, Agnew (2014) emphasized the biological foundation of negative emotionality. Traits of negative emotionality impact an individual’s evaluation of strain in certain situations. Individuals with these traits are more likely to commit crime and express anger when reacting to strain. The author claims that the emotional response of strain depends on the individual’s traits, which are biologically influenced.

**Conditioning Variables**

Drawing from stress literature, Agnew (1992) identifies cognitive, behavioral, and emotional coping strategies that show the possibility of an individual coping with strain legitimately. He highlights three instances in which this may occur: redirection, emotional, and behavioral coping methods.

Concerning redirection methods, individuals, when faced with a strain, may attempt to deal with it by ignoring it, or by changing the way they perceive it. The use of religion in this instance is a common strategy. These reactions are not likely to cause deviance, nor are they conducive to eliminating the strain, as these methods are more about changing perception. Emotional coping involves the comforting of the individual by others. It can also include exercise, meditation, sharing, etc. All of these strategies reduce emotional conflict. In spite of the ability of these strategies, not all emotional coping is positive. Substance abuse is another form of emotional coping. Behavioral
coping mechanisms can be either legitimate or criminal. Individuals using behavioral
coping mechanisms take action to address their strain.

According to Agnew (2006), strains increase the likelihood of crime if the
individual lacks coping strategies in specific conditions. One of GST’s key hypotheses is
that criminal coping is more frequent if certain conditioning variables are present
(Mazerolle & Maahs, 2000). GST identifies several conditioning factors related to coping
behaviors that explain the propensity of one individual to commit crime over another.
Poor coping strategies, according to GST, are at the heart of whether an individual will
resort to illegitimate, criminal behavior. Conditions leading to criminality include low
socio-economic status, low self-esteem, low self-constraint, and low self-efficacy, as
well as association with deviant peers and negative emotionality (Agnew, 1992, 2006;
Agnew, Brezina, Wright, & Cullen, 2002). This study utilizes social support, self-efficacy,
and differential association for conditioning variables to examine their role in moderating
the relationships between strains and misconduct.

Social support

When experiencing strain, criminal coping is more likely when the individual
cannot turn to others, such as family, friends, coworkers, and professionals, for social
support (Agnew & Brezina, 2010). Agnew states that individuals with emotional, social,
and financial resources can respond more appropriately to strains. Low social support
contributes to an increased risk of criminality as well. The absence of this resource is
likely to create more deviant coping mechanisms, leading individuals to associate with
delinquents and hold beliefs that justify and approve of criminal behavior (Anderson,
1999). According to Agnew (1992), there are three types of social support which
facilitate the major types of coping: informational support (e.g., provision of information
and advice), instrumental support (e.g., provision of actual services), and emotional support (e.g., provision of love, empathy, and trust). Unfortunately, police officers often do not have access to such social support networks, and they may turn to deviance to mediate stressors (Terry, 1981).

Furthermore, there is the cost-benefit analysis of crime. Agnew (2006) argues that some people in environments where the likelihood of sanction for crime is small are more likely to deal with strains by deviant behavior. They are poorly supervised by their parents, their friends do not care, neighborhood residents seldom report crime, they do not have jobs to lose, or they have the mistaken belief that crime is not wrong. With fewer ties to society, the individual has less to lose through criminal actions.

**Self-efficacy**

Self-efficacy, a person’s effectiveness in producing an intended result, is a trait that affects whether an individual will engage in cognitive, emotional or behavioral coping (Agnew, 1992). Agnew (1992) argues that sensitivity to objective strains and coping ability depend on these traits. In other words, individuals with high self-efficacy are more likely to alleviate strains with behavioral coping that is not delinquent, and are less likely to respond to strain with delinquency (Agnew, 1992). Furthermore, they are also less likely to associate with delinquent peers.

**Differential association**

Relationships with delinquent peers is an example of a negative coping strategy. Agnew (2015) argues that criminogenic strains force an individual to associate with other individuals who are favorable to crime and soon imitate and reinforce this crime themselves. Deviant peers and values condition the effect of strain on criminal activity.
Individuals who think favorably of substance use, and whose peers reinforce these behaviors, will be more likely to engage in substance abuse as a result of strain.

GST draws on social learning theories (Bandura, 1973; Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979) to identify a disposition to delinquency, which emphasizes the roles of attributions of adversity, deviant values and peers. In the social learning perspective, deviant values, attitudes and beliefs are learned just as conforming values are learned. Individuals who tend to attribute their adversity to others, and who hold deviant values and attitudes, have a greater disposition to deviance. It is argued that deviant values and the process of making attributions of adversity are learned over the life course and are reinforced by differential association with deviant peers.
CHAPTER 3
LITERATURE REVIEW

General Strain Theory Research

Even though Agnew's (1992) GST was not initially given a thorough test — to Agnew’s (2006) dismay — his theory has gained considerable attention recently and has undergone many tests on diverse populations. The theory has explained delinquency and crime by analyzing strains on individuals and groups (Aseltine, Gore, & Gordon, 2000; Mazerolle, 1998; Wallace, Patchin, & May, 2005). Strains like victimization or vicarious victimization (Baron, 2009; Hay & Evans, 2006; Manasse & Ganem, 2009), homelessness (Baron, 2006; Baron, Forde, & Kay, 2007), parental rejection (Agnew, 2005; Hay, 2003), unjust/unfair outcome (Mazerolle et al., 2003; Piquero & Sealock, 2004), child abuse (Baron, 2004), discrimination (Eitle, 2002; Eitle & Turner, 2003), and a negative secondary school experience (Moon, Hays, & Blurton, 2009) have been shown to increase the possibility of delinquency.

Agnew (1985, 1989) found links between negative stimuli, like poor family/school environments, and delinquency in a sample of male adolescents. The study, conducted with data from the Rutgers Health and Human Development Project, found that four of eight sources of strain increased drug use, and four increased delinquency (Agnew & White, 1992). The strains with the most negative results were feuding parents, life struggles, and negative events. To determine how strain influenced delinquent peers and low self-efficacy, this study used a composite strain scale, which showed that, whether tested longitudinally or cross-sectionally, negative stimuli had positive effects (increased occurrence) on delinquency and substance abuse. These findings held true even when conditioning variables of strains, such as delinquent peers and self-efficacy,
were included in the model. Many other studies had similar results, citing a positive influence of negative stimuli on drug use and delinquent behavior, as well (Aseltine & Gore, 2000; Aseltine et al., 2000; Broidy, 2001; Eitle, 2002; Eitle & Turner, 2003; Hoffmann & Cerbone, 1999; Hoffmann & Su, 1997, 1998; Mazerolle, 1998; Paternoster & Mazerolle, 1994).

Agnew and White’s (1992) study was extended by Paternoster and Mazerolle (1994), who, with data from the National Youth Survey (NYS), found that negative life events/relationships with adults, neighborhood problems, and school/peer problems have an effect on delinquency. Consistent with Agnew and White’s hypothesis, the authors did not observe interplay between composite strain measures and beliefs, deviant peers, and social support. They proposed that feelings of distress that accompany strain could be managed by other strategies that were not tested in their study. A path analysis, however, revealed that strain affected adolescents indirectly via deviant peer associations and social control. At the same time the strain was shown to affect delinquency directly (Paternoster & Mazerolle, 1994).

Hoffmann, Cerbone, and Su (2000) found through growth curve modeling that a series of negative events in an individual’s life spurred the “growth” of delinquency and drug use in adolescents. Other variables have been used by researchers to measure negative stimuli: family strain (Hay, 2003), homelessness (Baron, 2006), racial or gender discrimination (Simons, Chen, Stewart, & Brody, 2003; Walls, Chapple, & Johnson, 2007), victimization or maltreatment (Eitle & Turner, 2002; Hay & Evans, 2006; Robbers, 2004), negative personal relationships (Agnew & Brezina, 1997; Mazerolle, 1998), and neighborhood/school problems (Johnson & Morris, 2008;
Paternoster & Mazerolle, 1994). These factors have all been shown to increase delinquency.

**Types of Strains**

Referring to Agnew’s GST (1992), researchers have conducted studies that tested the three types of strains Agnew defined: failure to achieve positive goals, removal of a positive stimuli, and presentation of negative stimuli. The following three sections describe more detailed research pertaining to each of Agnew’s types of strains.

**Failure to achieve positive goals**

The first type of strain Agnew defines in his GST is the failure to achieve positive goals. Goal blockage has been shown, in some instances, to be linked to violent crimes and property crime (Ostrowsky & Messner, 2005). Baron (2004), however, did not find supporting evidence for the assertion that lack of money affected violent crimes, but was in agreement that property crime incidences did increase. Robbers (2004) and Baron and Hartnagel (2002) found a relationship between goal blockage and delinquency, but in a college student sample Broidy (2001) did not find support for this claim. Broidy (2001) acknowledged that the study only used cross-sectional homogeneous student data and this would have precluded firm conclusions regarding the relationships among the variables tested. Broidy (2001) found that unfair outcomes, a subset of failure to achieve positive goals, are significantly related to anger, and strain-induced anger significantly increases the likelihood of crime. According to Agnew (2013), little research has shown the relationship between inequity and delinquency. Several studies have shown that inequity leads to anger and deviance (Broidy 2001; Eitle 2002; Mazerolle & Piquero, 1998). Other scholars found that unjust academic
evaluation has a relationship with delinquency (Mazerolle & Piquero, 1998; Mazerolle et al., 2003).

**Removal of positive stimuli**

In a test on college students, Mazerolle and Piquero (1998) and Mazerolle et al. (2003) found that the removal of positive stimuli led to shoplifting, whereas an unfair grade, viewed as an unjust strain, increased incidences of fighting. Interestingly, after the authors established controls for other variables, the removal of positive stimuli was insignificant. It is possible that the acts of deviance tested were not actions the subjects would take when experiencing strain, rendering this variable null when other variables were controlled. Composite strain from various sources was found to have a direct influence only on violence (Mazerolle, Burton, Cullen, Evans, & Payne, 2000), while other researchers found that composite strain affected different types of delinquent acts, such as violence and substance use (Slocum et al., 2005), and property offenses (Piquero & Sealock, 2000).

**Presentation of negative stimuli**

Data has shown that the presentation of negative stimuli may lead to aggression (Bandura, 1973; Zillmann, 1979). While there is a wide range of negative stimuli, for the purposes of the present study it is important to note that delinquency/aggression has been linked to negative stimuli such as negative relations with peers (Kaplan, Robbins, & Martin, 1983; Linsky & Straus, 1986; Novy & Donohue, 1984). In a longitudinal study, Agnew (1989) attained proof indicating that negative stimuli lead to delinquency.

**Strain and Deviance**

Not all strains are created equal. Certain types of strains have shown a greater tendency to create deviant behavior. Agnew (2001) found that erratic punishment,
discrimination, poor grades/conflict with teachers, victimization, bad neighborhoods, poor parenting, parental rejection and the failure to achieve masculinity, financial success, happiness, or autonomy are very likely to lead to deviance.

Prior studies have tested the objectivity of strains to determine delinquency. Adolescents in Italy were found by Froggio and Agnew (2007) to be more susceptible to deviance if they viewed academic or romantic failures as serious. Adolescents who viewed similar failures as less important were not as prone to deviance. But, according to Botchkovar, Tittle, and Antonaccio (2009), the subjective opinion of strain did not increase accuracy in predicting ensuing criminality in three European samples. The authors suggest that their model can be altered to be more adequate if objective and subjective strains are considered simultaneously, or with subjective strains acting as a mediator between objective strain and criminality.

The witnessing of victimization, even when controlled for one's own victimization, appeared to affect individuals as well (Eitle & Turner, 2002). Likewise, violence appears to have a direct effect on violent behavior (Spano, Rivera, & Boland, 2006). Baron (2009) concluded from studying a sample of homeless youth that victimization leads to crime, as well as vicarious and anticipated victimization. These findings agree with Agnew (2002), who found that those strains were most likely to lead to crime. Online bullying has also been shown to be a considerable source of strain that results in deviant actions (Hinduja & Patchin, 2007).

Brezina (1996) examined the viability of delinquent coping as a means of reducing or eliminating strain and negative emotions. He found that strain was a significant predictor of anger, anxiety, resentment, and depression, and that
delinquency lessened the effect of strain on these negative emotions. In simpler terms, deviance alleviated some of the negative effects resulting from the experience of strain. Brezina (1996) classified forms of deviant coping as escape-avoidance (running away, truancy), compensation (theft, drug use), and retaliation (revenge, aggression).

Stress from family sources has been shown to precede certain types of delinquency in American (Hollist, Hughes, & Schiable, 2009) and international populations (Cheung, Ngai, & Ngai, 2007). Familial abuse, whether experienced or witnessed, was shown to positively affect deviant actions in a sample of Philippine youths (Maxwell, 2001). Abuse from teachers, physical and/or emotional, has also been shown to be a considerable strain that leads to criminal behavior in adolescence (Morash & Moon, 2007; Moon, Hays, et al., 2009).

Warner and Fowler (2003), using a macro-level test of GST, concluded that higher incidence rates of offense occur in neighborhoods that experience greater strain. In this test, strain had a "greater effect than informal social control on neighborhood level offending." This suggested that the lifestyle found in disadvantaged neighborhoods is a source of individual strain.

Agnew also described racial discrimination as a major strain, with considerable influence on deviant behaviors (Moon, Hays, et al., 2009). Perez, Jennings, and Gover (2008) showed that the effects of racial discrimination extended to Hispanic populations as well. The studies showed that strains associated with racial discrimination were very predictive of violence. Concerning females, similar effects were found when considering gender discrimination (Eitle, 2002). Such outcomes are not limited to the adolescent populations studied in the aforementioned examples. Hinduja (2007) found that adults,
when subjected to harassment in the workplace, were more likely to indulge in self-
damaging behaviors.

Of Agnew’s (2001) predictions regarding strain that increases deviance, little
support has been shown for his hypothesis concerning peer abuse. According to Moon,
Morash, et al. (2009), bullying behavior does not increase deviance. They proposed that
subjects of bullying are more likely to become isolated and depressed, therefore
rendering them unpopular with peers. Unpopularity could lessen the chance that the
bullied individual associates with peers and therefore has a lower chance of becoming
involved with peer delinquency.

According to one of the most complete tests of GST, anger is the best predictor
for deviance (Baron, 2004). Baron’s GST test also found that the ten strains that Agnew
(2001) had argued would lead to deviance also had effects on offending outcomes.
Baron’s study was particularly thorough, because it focused on homeless youth, who
had experienced a variety of strains and stressors, while the typical high school or
college student samples had only experienced a relatively limited amount of strain.

Slocumb et al. (2005) were able to show that deviance occurred with greater
frequency after an individual experienced strain or after a string of strains. These
findings explained the variation of occurrence of infractions throughout a life cycle. The
study was conducted with three-year retrospective data and a sample of incarcerated
females.

Finally, behavior is most affected in the same arena where the strain originates.
For example, school behavior is negatively affected if the individual suffered strains in
school. The same is true for familial strain and behavior. While there are incidences of
"spillover," where strain from one aspect of life affects another, it most frequently affects the area where the strain is centralized (De Coster & Kort-Butler, 2006).

**Types of Deviances**

Although GST was meant to act as an umbrella theory that could cover any number of offenses, it has been most frequently linked with violent behavior (Aseltine et al., 2000; Mazerolle et al., 2000; Paternoster & Mazerolle, 1994; Piquero & Sealock, 2000). Mazerolle et al. (2000) found little to link GST with other deviances, like drug abuse and non-violent crime, but they acknowledged that their sample favored individuals with above average socioeconomic status, who could experience relatively less strain than the general population.

The type of strain is also related to the deviant action. For example, in accordance with Agnew’s umbrella theory, Bao, Haas, and Pi (2004) observed that the emotion dictates what crime is committed, with anger leading to violence, property crime, and school crime, while resentment leads only to property crime and school crime, and both anxiety and depression are associated with school crime.

The link of deviant behavior to strain was also observed for highway crimes, such as aggressive driving, speeding, and risk taking. Ellwanger (2007) found that strains can be induced by other drivers when they unjustly increase speeding, use aggressive maneuvers, and drive recklessly. But the study also found that other sources of strain not deemed unjust, such as road building and police presence, did not increase deviance in affected drivers (Ellwanger, 2007).

Support has been shown for GST in white-collar crime, another type of non-violent deviance. Although somewhat lacking in data regarding negative emotions and coping mechanisms, Langton and Piquero (2007) found that strains, such as marriage,
neighborhood, academic performance, value of assets, value of liabilities, and employment history, are major predictors of white-collar crimes like antitrust/securities violations, tax fraud, false claims and settlements, and bribery. Furthermore, strain has been linked to certain blue-collar workplace behaviors (Arter, 2007). This includes police in high-stress situations, who show poorer behavior in citizen contacts and use of force compared to their less stressed peers (Arter, 2007).

Unhealthy behaviors, such as bulimia (binge eating and purging), can also be effectively explained by GST. Studies of female college students indicated that bulimia is linked to the interaction of anger and depression (Sharp, Terling-Watt, Atkins, Gilliam, & Sanders, 2001). Likewise, studies of adults who were undergoing chronic strain (Stack & Wasserman, 2007) and American Indian youth (Walls et al., 2007) showed that strain was linked to suicidal behavior.

Sexual and physical abuse of children and adolescents has been shown to increase other types of unhealthy behavior, such as drug use during adolescence and early adulthood (Agnew & White, 1992; Carson, Sullivan, Cochran, & Lersch, 2008; Ford & Schroeder, 2008; O’Hare & Sherrer, 2000; Preston, 2006; Stogner & Gibson, 2011; Swatt, Gibson, & Piquero, 2007). Lo, Kim, and Church (2008) found that either type of abuse increases marijuana and other drug use, but their data did not show a consistent link of the type of abuse with type of drug use.

**Emotion and Deviance**

The studies mentioned above provide a positive relationship between a variety of strains and misconduct. The following section goes beyond the strain itself and focuses on the emotion produced by certain strains and provides more detail on the findings.
linking affective negative emotion, particularly anger and depression, to general misconduct.

**Anger**

Some have tested the contention that strain's impact on deviance works through negative influence and have exhibited confirmation to support this perspective (Kaufman, 2009; Tittle, Broidy, & Gertz, 2008). Deviant outcomes have been shown to be brought about by anger, a negative emotion (Brezina, 1998; Broidy, 2001; Capowich et al., 2001; Hay, 2003; Jang & Johnson, 2003; Mazerolle & Piquero, 1998; Piquero & Sealock, 2000; Simons et al., 2003). While some studies find that anger brings about the effects of strain on deviance, other studies find that strain brings about the effects of anger on deviance (Mazerolle et al., 2000). It seems that most of the research assessing GST finds mixed results concerning the suspected role of anger. However, it is accepted that anger is important when assessing misconduct. Furthermore, the extent to which anger is activated can vary greatly depending on culture, personal characteristics, environment, etc. Anger has been studied in different cultures around the world including Iceland (Sigfusdottir, Farkas, & Silver, 2004), Canada (Baron, 2004), and South Korea (Morash & Moon, 2007).

Ganem (2010) found that strains brought about from events that are intentional and personal lead to anger and a greater likelihood of striking another person. In addition, encountering blocked goals prompts frustration and leads to fear. As a result, Ganem (2010) found that fear prompts escaping behavior like skipping class. Fear and frustration are sometimes closely linked with anger in that they can be mediating emotions for anger.
Agnew (1989) reported that poor family and school environments significantly affected anger. Anger had a greater effect on delinquent behavior than other emotions such as depression, frustration and fear. These results were consistent in longitudinal and cross-sectional studies.

Aseltine and colleagues (2000) and Mazerolle and Piquero (1998) found that anger contributes to the effect of strain on violence, but not drug use and non-violent crime (Aseltine et al., 2000), nor for alcohol or property crime (Mazerolle & Piquero, 1998). In conclusion, according to Mazerolle and Piquero (1997, 1998), strain has indirect effects on delinquency through anger. This finding is limited, however, given that certain strains and feelings of anger may relate only to certain types of deviance that were not tested in this study.

The aforementioned studies, and others, found that anger only partially affects strain’s influence, both directly and indirectly, on delinquency (Agnew & White, 1992; Aseltine et al., 2000; Hay, 2003; Hay & Evans, 2006; Mazerolle & Maahs, 2000; Perez et al., 2008; Sigfusdottir et al., 2004). Conversely, other studies have found that anger fully mediates the effects of strains (De Coster & Kort-Butler, 2006; Sharp, Brewster, & Love, 2005). Other studies have found that certain types of delinquency are not affected by anger (Hay & Evans, 2006), whereas some studies find that anger is connected to delinquency that is directed outward, like fighting (Aseltine et al., 2000; Capowich et al., 2001).

**Depression**

Only a few studies have delved into negative emotions other than anger to study their effect on delinquency (Broidy, 2001; Ford & Schroeder, 2008; Hollist et al., 2009; Jang, 2007; Jang & Lyons, 2006; Sharp et al., 2005; Walls et al., 2007). One of these is
depression, which has been the focus of several studies. It is important to note that depression has not received wide attention in relation to GST. For this reason, there are fewer tested samples and variables, which could explain why the literature on this is inadequate.

In an attempt to explain gender differences in crime, researchers have focused on the interplay between strain, depression, and crime (Broidy & Agnew, 1997; Jang & Johnson, 2003; Ostrowsky & Messner, 2005; Peirce, Frone, Russell, & Cooper, 1994; Piquero & Sealock, 2004; Sigfusdottir et al., 2004). While most studies have failed to make the connection between depression and crime as strongly as the case with anger and crime, some research has shown that depression does mediate the relationship between strain and crime (Bao et al., 2004; Jang & Johnson, 2003), while most studies failed to find this effect (Ostrowsky & Messner, 2005; Sigfusdottir et al., 2004). Jang and Johnson (2003) showed that depression plays a mediating role between strain and drug use. Furthermore, Jang and Lyons (2006) suggested that inward emotions, like depression and anxiety, are more likely than outer emotions, such as anger, to cause withdrawal from personal interactions.

Withdrawal could be why there are fewer findings connecting depression and delinquency. Piquero and Sealock (2000, 2004) found that property crime and aggression were not related to depression. Furthermore, Aseltine et al. (2000) could not find any support for a connection between anxiety/depression and delinquency.

Ford and Schroeder's 2008 study found that students undergoing academic strain suffered from high levels of depression. As a consequence, these students illicitly
self-medicated with prescription stimulants. Therefore, Ford and Schroeder's study concluded that depression does mediate the strain-delinquency relationship.

Similar negative coping strategies were found in another study (Sharp et al., 2005). A combination of depression, guilt, and anxiety mediated strain and eating disorders. Shoplifting and impaired driving infractions were also found to be related to anxiety (Capowich et al., 2001), while depression was found to be related to suicide (Walls et al., 2007) and substance abuse (Hoffmann & Su, 1998). Fighting, however, was not related in these cases. Referring to the findings above, the lack of outward physical violence may be related to the urge to withdraw instead.

**Anger and depression**

The mediating effects of anger and depression have also been shown in examples of sexual abuse. In Icelandic populations, sexual abuse and delinquency are mediated by anger, while sexual abuse and suicide are mediated by depression (Sigfusdottir, Asgeirsdottir, Gudjonsson, & Sigurdsson, 2008). Jang and Lyons (2006), in a sample of African-Americans, found that negative emotions like depression and anxiety affected withdrawing behavior more than anger.

Both depression (Manasse & Ganem, 2009) and anger (Hays & Evans, 2006) have been shown to mediate the effect of victimization on future delinquency. In a sample of law enforcement officers, depression and anxiety mediated on-the-job strain and alcohol abuse (Swatt et al., 2007).

An interaction between anger and depression has also been shown to lead to crime (Sharp et al., 2001; Smith & Thomas, 2000). On the other hand, some studies have found that with the coexistence of depression and anger, depression decreases the tendency for criminal acts (Sigfusdottir et al., 2004). While the outward urge to react
to anger is present, the feelings of withdrawal or isolation that come with depression may ultimately cause an individual to retreat rather than commit a crime. Similarly, Agnew (2006) explained that more research is needed on the correlation between anger and depression because, it is unclear if depression alone can drive criminal behavior.

Lastly, some studies find depression prevalent in females after experiencing strain, while men react to strain with anger. This could explain why strain tends to lead directly to crime for men, but not women (De Coster, 2005). Zautra, Berkhof, and Nicolson (2002) analyzed the emotional life changes of workers in stressful situations to evaluate if there were contrasts in the level of autonomy during positive and negative feelings. It was observed that when stress was low, the worker's positive sentiments were almost totally free of their negative emotions, but when stress was high, positive and negative feelings were not independent. The relationship was inverse: a high level of negative emotions was associated with a low level of positive emotions. Huge stressors likewise created higher levels of mental distress. Furthermore, an outbreak or repetition of psychiatric disorders such as severe depression, anxiety disorder, substance abuse, and posttraumatic stress disorder could be anticipated (Brown & Harris, 1978; Dohrenwend & Dohrenwend, 1974; Thoits, 1995).

Taking a different approach, Brezina (1996) studied the implicit GST claim that delinquency serves as a coping strategy and ultimately makes the individual feel better. He found that individuals suffered from increased negative emotions due to strain, and juveniles indeed felt better after delinquent acts.

**Emotional States and Traits**

Negative emotional traits, brought about by chronic or repeated strains, influence the emotional reaction of an individual in a stressful situation (Agnew, 2006; Agnew &
Brezina, 2010). The majority of studies exploring the role of negative emotions utilize a measure of trait (individual tendency) rather than state (situation) anger (Brezina, 1998; Hay, 2003; Kaufman, 2009; Mazerolle & Piquero, 1997, 1998; Mazerolle et al., 2003). The two are distinct in that trait anger is defined as a person's overall disposition towards being angry whereas state anger refers to anger that develops as a result of, or in reaction to, a specific situation. This is not to say that the two are not connected, as trait anger has been shown to affect state anger (Agnew, 2006; Mazerolle et al., 2003), but the inclusion of state anger as opposed to trait anger in future studies may improve the predictive power of GST.

Several studies support that emotional traits are positively related to strain (Agnew, 1997; Bernard, 1990; Brezina, 1996). Jang and Rhodes (2012) reported that strain and trait anger work together to cause violent crime, while strain and property crime and strain and marijuana usage are mediated by state depression and state anxiety, respectively.

A review by Mathews and Macleod (1994) documents widespread evidence supporting these ideas and summarizes the ways in which trait emotion can cause cognitive biases (such as selective attention, encoding, interpretation, and memories) that precipitate trait-congruent state emotion. Although most attention in Mathews and Macleod’s review is given to state anxiety and depression, and not to state anger, research by Deffenbacher, Oetting, Lynch, and Morris (1996) indirectly fills this gap. Deffenbacher et al. (1996) found that individuals high in trait anger become angry more frequently, experience more intense anger, express their anger in more maladaptive
ways, and suffer more negative consequences from their anger when compared to those low in trait anger.

State anger, according to Agnew (2001), causes more crime than trait anger. Mazerolle and colleagues (2003) also analyzed the problem of state versus trait anger and found that fighting and shoplifting were linked to state anger, while trait anger only resulted in assault. However, other researchers still contend that those with trait anger are far more likely to respond with anger to a strain (Hay, 2003; Mazerolle & Piquero, 1998; Mazerolle et al., 2000). On the other hand, using a different method, Ellwanger (2007) found that strain combined with situational (state) frustration greatly affected driving delinquency.

Supporting results have also been found in studies that test for situational (state) emotions other than anger (Ganem, 2010; Jang, 2007; Jang & Johnson, 2003). Jang (2007) asked subjects what they feel when encountering a strain. The study concluded that alcohol use, or other coping strategies like religion, increased with situational distress.

Likewise, using a scenario method of research, Ganem (2010) found that situational strain in juveniles caused fear and increased the occurrence of skipping class. What was not found, however, was an increase in drug use. Depression, recently defined in a study as a clinical disorder and therefore a trait-emotion, is more difficult to analyze (Manasse & Ganem, 2009). Manasse and Ganem (2009) utilized trait-depression measurement from the NYS data and found that trait-depression has a moderating, not mediating, role in the strain-delinquency relationship.
Conditioning Variables and Deviance

There is very little agreement as to whether a variety of coping mechanisms and other proposed factors affect the response to strain in the way that Agnew argues. The following section reviews the work assessing whether or not certain factors condition the effect of strain.

Social support

Several works, including that of Mazerolle and Maahs (2000), have shown that social support conditions the effect of strain, but others found no evidence that social support altered the effects of strain in this way (Johnson & Morris, 2008; Tittle et al., 2008). These results however, do not necessarily deny that social support may serve as possibly predicting the strain and crime relationship. However, Robbers (2004) reported that there was a significant effect of social support on delinquency, indicating that an increase in social support led to a decrease in delinquency. Furthermore, there were implications for moderation between social support and the inability to achieve certain goals. Paternoster and Mazerolle (1994) did not obtain the same findings and instead found no evidence for the moderating effect for social support. Their sample, however, had a lower average age than Robbers’ (2004) sample, suggesting that the Robbers sample had possibly experienced more strain due to more years of exposure to strain.

When considering shoplifting to test these theories, other scholars found that there was a moderating relationship between strain and social support for shoplifting (Capowich et al., 2001). Gibson, Swatt, and Jolicoeur (2001) reported that stress could be mediated by a compensating social support network. Arter (2007) found that officers experiencing negative emotions and who had supportive factors available were less
likely to react with deviant behaviors. Likewise, those without supportive factors were more likely to commit devious acts.

Tittle et al. (2008) demonstrated that social support and delinquent peers did not show moderating or mediating effects on crime. The authors suggested that these results may be due to adults choosing not to ask for help from friends and family, even if they have a broader spectrum of support available. In other words, adults may call on social support only when all other options to reduce strain have been tested. In America’s individualistic society, it is not surprising that many adults choose not to reveal their shortcomings or issues with other members of society for fear of looking weak or unsuccessful.

Those studies reporting the conditioning effect of social support often qualify their results as only providing mixed support, because those with more negative life events are more likely to engage in deviance regardless of conditioning factors (Hoffmann & Miller, 1998).

**Self-efficacy**

Self-efficacy conditions strain by influencing an individual’s sensitivity to objective strains and how s/he subjectively interprets them. It also affects one’s ability to additionally use cognitive, behavioral, and emotional coping strategies (Agnew, 1992). Individuals with a high degree of self-efficacy feel that they can deal with problems through legitimate channels of activity. It follows that people with low self-efficacy will be less apt to deal with strains and more likely to engage in deviant coping (Agnew, 1992). Self-efficacy has shown its conditioning effect in several studies (Aneshensel, 1992; Compas, 1987; Hoffmann & Miller, 1998; Mazarolle & Maahs, 2000; Pearlin, 1989). Using data on 1380 New Jersey adolescents, Agnew and White (1992) found that self-
efficacy significantly moderates the relationships between strains and delinquency. Also Paternoster and Mazerolle (1994) used the NYS data to show that self-efficacy moderates the relationships between strains and delinquency.

**Differential association**

Agnew (1992, 2010) argued that individuals who undergo strain are more likely to join delinquent peer groups and acquire or justify a belief favorable to crime. Individuals having delinquent friends tend to commit crimes responding to strains because the delinquent friends play a role model, support their delinquent behaviors, and inspire their criminal values. The author also argued that delinquent friends hinder adaptive coping and decrease the constraints to maladaptive coping.

Similarly, in their longitudinal study with the NYS data, Paternoster and Mazerolle (1994) demonstrated that strains encourage association with delinquent friends. While almost every study that included a measure of deviant friends found it to be closely related to deviance (Akers, 1998), some studies do not show that such association interacts with strain as Agnew proposed. For example, Aseltine et al. (2000) found that family conflict is a significant factor in deviance, while peer conflict is not related. According to Bossler and Holt (2010), the effect of low self-control on the likelihood of cyberdeviance and cybervictimization was mediated by peer association.

As it applies to the police, Alpert and Dunham (1997) found differential association, or peer influence, to be one of the most significant pressures on police officers.

As stated above, failure to find significant moderation relationships of these conditioning variables could be due to the breadth of GST, and the lack of tested coping strategies in these studies. More thorough research is needed focusing on different
populations to determine accurate relationships between strain, coping strategies and delinquency.

**Generalizability of GST**

As designed, GST was initially expected to explain deviance in all groups and cultures, as well as explain differences between groups. In addition to the United States, strain has been shown to have an effect in samples from South Korea (Moon & Morash, 2004; Morash & Moon, 2007), Iceland (Sigfusdottir et al., 2004), Canada (Baron, 2004) the Philippines (Maxwell, 2001), Italy (Froggio & Agnew, 2007), and Ukraine (Botchkovar et al., 2009). GST has been repeatedly tested in adolescent and college samples, and has proven to be applicable in young adult populations (Ostrowsky & Messner, 2005). It has been used to explain variations in police behavior with domestic violence (Gibson et al., 2001), alcohol consumption (Swatt et al., 2007), and adultery and promiscuity (Arter, 2007).

GST has demonstrated significant correlations with violent crime, property crimes, and other deviant behavior, and has shown that strains lead to deviance by mediation of negative emotions. Strain and violent crime has been shown to be the most perpetual and strongest relationship (Aseltine et al., 2000; Mazerolle & Piquero, 1998; Piquero & Sealock, 2000). Aside from his 1992 study, which focused on adolescent delinquency, Agnew (2006) showed which strains are the most likely to cause crime in adults. Studies which examined individual cases of deviance found that strain occurred from work in the secondary labor market, unemployment, marital problems, failure to achieve selected goals, criminal victimization, residence in economically deprived communities, homelessness, and discrimination based on variables such as race/ethnicity and gender.
Why Further Research on GST is Needed

While so much research has studied the effects of strains on deviance, there are two main limitations for using GST to explain deviance. The first is the inability to prove GST false. A main criticism of GST is that while empirical evidence acknowledges that a relationship exists between strain and delinquency, not all strains account for all forms of delinquency (Broidy, 2001; Mazerolle & Piquero, 1998). This suggests that General Strain Theory cannot be proven wrong (Jensen, 1995). With many strains affecting diverse individuals in different environments, mediated by different emotions, and resulting in different types of deviance, it is challenging to suggest a foolproof theory for connecting a particular strain to a particular delinquency. The number of factors that must be taken into account makes it impossible to find a direct causation for any single type of delinquency.

Regarding the lack of falsification, the most significant shortfall of GST appears in the varied results of studies on the importance of negative emotions and conditioning variables (coping strategies) in GST. Regarding negative emotions, empirical research yields mixed results concerning the mediating effects of negative emotion on the relationship between strain and delinquency. Researchers have suggested that anger is related to certain criminal acts such as fighting (Agnew, 1985; Baron, 2004; Hay & Evans, 2006) but not other non-violent types of delinquency (Baron & Hartinagel, 1997; Capowich et al., 2001). In terms of emotions other than anger, such as anxiety, researchers have neglected to find any mediating effects on this strain-delinquency relation (Aseltine et al., 2000; Broidy, 2001). The influence of conditioning variables failed to support the GST in several studies (Aseltine et al., 2000; Johnson & Morris, 2008; Stogner & Gibson, 2011; Tittle et al., 2008), while other studies showed partial
support (Bao et al., 2007; Carson et al., 2008; Hay & Evans, 2006). Unfortunately, a limited number of studies have effectively integrated all significant strains into one concise model. Completion of this may contribute to a better understanding of how varying strains impact delinquency. Additionally, few studies have accurately evaluated the mediating effects of emotions besides anger.

Furthermore, a crucial limitation regards the fact that most published studies have solely involved sampling from the United States (Froggio, 2007) while also exclusively examining juveniles (Arter, 2007), thereby hindering the generalizability of GST. Moreover, only several studies have tested GST for police officers’ deviance (Arter, 2007; Gibson et al., 2001; Swatt et al., 2007).

Because police officers work in emotionally and physically harsh environments, their reactions to strain and negative influences would be different and possibly more harmful than those of other adult populations. They may experience stronger feelings of injustice when handling their jobs in unfavorable situations (Terry, 1981), making it more likely for deviant coping strategies to be used (Agnew, 1992, 2001).

It has been argued that researchers need to test theories in different countries in an effort to increase generalizability and development of the theory (Piquero & Seolock, 2000). Generalizability will essentially determine the applicability of the theory in various cultural settings, such as South Korea. Recently, Agnew (2015) emphasized the need for GST to be applied to different societies, especially Asian societies. Hoffman and Sue (1998) supported this by suggesting that it is vital for studies to be applied to other social settings in order to understand the issue entirely (Hoffmann & Su, 1998).
Froggio and Agnew (2007) established confirmation of GST in Italy, while Baron (2004, 2006) has found similar results by testing GST with a sample of Canadian street youth. Eastern cultures, however, may fluctuate very much from Western cultures in terms of cultural and social deviation.

**Police Stress and Misconduct Research**

**Police Stress**

In this section, police stress literatures are reviewed in terms of their relationship with police misconduct. It is noted that this study will use the strains outlined in GST as proxy names for the police stressors. To begin, it is important to indicate that police stress is difficult to compare with a random sample of the general population, because officers may have a higher tolerance for stress given the requirements of the job (Mallory & May, 1984). However, it has been reported that police work is one of the most stressful job occupations (Anshel, 2000; Brown & Campbell, 1994; Dantzer, 1987). Fennell (1981) describes stress as being a “cop killer.” He believes that police work is “the most dangerous job in the world emotionally” (p. 170). There is evidence that job stress affects officer’s personal lives (Lester & Mink, 1979) and that officers sometimes perceive a need for counseling (Levitov & Thompson, 1981). Fell, Richard, and Wallace (1980) conducted a thorough study and attempted to compare police stress with that of other occupations by studying death certificates, mental health center reports, and admission data for medical health of police officers alongside equivalent documents for 130 different professions. They found that police ranked 24th in premature death, 3rd in suicide, and had a greater than average rate of being admitted to the hospital. Lester and Mink (1979) found that policemen reported that job-related stress affected them outside of work significantly more than it affected office workers.
Over time, researchers have employed similar methods when categorizing the causes of stress for police officers (Coman & Evans, 1991). In the 1980s, Wexler and Logan (1983) distinguished between external, organizational, task-related and life stressors. A little over a decade later, Finn and Tomz (1997) used similar categories, but with a few minor changes and concluded that the four types of stressors for law enforcement are: (1) the police organization (i.e., role ambiguity), (2) police work (i.e., dangerous environments), (3) working with the public and justice system (i.e., misrepresentation by the media and working in an unproductive justice system), and (4) life stressors (i.e., family disputes, financial obligations). Similarly, Daniello (2011) identified: (1) inherent stressors (occupational), (2) intragroup stressors (e.g., relationships with family and friends, criminal justice system, role conflict), (3) organizational and interpersonal stressors, and (4) individual stressors. In all, the various categorizations are similar.

While prior studies have focused on a variety of categories for determining police stress, occupational and organizational stressors have received the most attention.

Occupational stress is one cause that can explain negative police behaviors. Many studies have suggested that police officers, due to their occupational role, undergo a higher degree of stress than members of other occupational groups (Kroes & Hurrell, 1975; Fell, Richard & Wallace, 1980). These stressors include dealing with the judicial system (Ayres & Flanagan, 1994; Kroes, Hurrell, & Margolis, 1974; Kroes, Margolis, & Hurrell, 1974; Stratton, 1978), public scrutiny (Violanti & Aron, 1994; Kroes, 1985; Kroes, Hurrell, et al., 1974), officer-involved shootings (Violanti & Aron, 1994; Gersons, 1989; Coman & Evans, 1991; Stratton, Parker & Snibbe, 1984; Sewell, 1983),


**Police Stress and GST**

The literatures on police stress are based on the stressors that officers confront in their work environment. Specifically, scholars have examined that dangerous work environments and harsh discipline are critical factors exerting a negative effect on officers’ behaviors. These stressors are very compatible with the strains of GST (Swatt
et al., 2007). Research has shown that psychological stress felt by police has been linked to diverse social problems, such as family disputes (Cain, 2015; Maslach & Jackson, 1981; Nordlicht, 1979), substance use disorder (Ballenger et al., 2011), excessive worrying (Territo & Vetter, 1981), suicide (Violanti, 2004) and a perceived need for therapy (Levitov & Thompson, 1981).

GST posits that there are three main strains, failure to achieve positive goals, presentation of negative stimuli, and removal of positive stimuli affecting an individual’s behavior. These strains include general experiences or events and are not limited to police work-oriented stress. However, this section mainly explains job-oriented stress and focuses on how negative experiences in the field operate as strains to cause police misconduct. Officers are already experiencing the general strains of GST as lay people, but job-oriented stressors are the most influential cause for their stress.

It is important to note that stressors are inherent in police work. Dealing with crime on a daily basis, facing organizational conflicts, and balancing family and work life are all examples of stressors that create a stressful occupational environment for officers. Officers experience the general strains mentioned by Agnew (1992) but also experience specific stressors pertaining to the police environment. While alluding to Agnew’s three main types of strain, failure to achieve positive goals, presentation of a negative stimuli, and removal of a positive stimuli, the following sections examine the main types of police stressors, operational, intragroup, organizational, and individual characteristics (Daniello, 2011) and their relationship with police misconduct.

**Failure to achieve positive goals**

For many officers, the nature of policing seems more defensive and passive than progressive and active, causing officers to feel stress when they are unable to meet
goals set by themselves and their supervisors. On the other hand, the monotonous work and inactivity can leave officers feeling unsatisfied with the work they are doing. There are also intragroup stressors from organizations working with the police force. The criminal justice system, or courts more specifically, can cause delays, leaving citizens frustrated with the inefficiency of the police force (Weber Brooks & Leeper Piquero, 1998). Research shows that jobs requiring care and responsibility for others render more stress, especially if it is difficult to see any positive results for your efforts (Pines et al., 1981). In the case of police work, it becomes more difficult to maintain order when officers are experiencing criticism for procedures managed by other organizations.

The failure to achieve autonomy and masculinity in an organization or group can lead to delinquency (Agnew, 2001). Unfortunately, this happens quite frequently in the police work environment. Due to the structure of the police force, which is organized along military lines, most departments tend to be extremely rigid in their hierarchical nature and very bureaucratic. This may result in an unchangeable management style that rejects lower-level involvement and discretion, and tries to maintain a fully supervised department. Many studies have suggested that stress is common in departments with the traditional top-down management style (Kroes, Hurrell, et al., 1974; Standfest, 1996).

Due to this structure, many officers (especially lower-level law enforcement) may undergo the goal-blockage strain of role conflict or role ambiguity. Police officers face many situations without clear roles and responsibilities (Brown & Campbell, 1994). Many of these are “no win” situations because law enforcement causes criminals to experience criminal responsibility by any means necessary, but the department expects
the police officers to exercise police force observing the law. Bartol, Bergen, Volckens, and Knoros (1992) argued that “the fishbowl effect,” citizens having unrealistic expectations of police officers, causes the police force to suffer. This results in the inability to perform tasks effectively and handle problems successfully (Eisenberg, 1975).

Un fortunately, officers face many unjust situations while policing. GST proposes that anger is a common emotion felt when individuals encounter strain arising from unjust situations. This leads to efforts to take correct the unjust action and also the desire to take revenge on the person or organization that delivered the unjust treatment. Mass media coverage can also distort police activities, casting a negative light on the police organization (Storch & Panzarella, 1996). Inaccurate and unfavorable media broadcasting can influence supervisors, who from time to time handle issues dealing with officer performance unjustly and take disciplinary actions due to biased media coverage (Eisenberg, 1975). In terms of promotions, officers feel the stress of unequal treatment when they perceive others receiving improper rewards while they receive little recognition for their productivity (Eisenberg, 1975; White & Honig, 1995). In many cases, officers also feel unjustly recognized when they receive a promotion that is not related with their performance or quality of police service.

Inside the organization, gender stress has proven to be problematic (Sklansky, 2006). Females and ethnic minorities tend to subordinate themselves to white male police officers (Darien, 2002). For female police officers, there are many conflicting role expectations in policing both on and off duty (Alkus & Padesky, 1983). In the male-dominated environment, females feel unfairly treated for reasons including chance for
promotion, difficulty in transfer to a desirable position, sexual implications, flirting, etc. (Morash & Haarr, 1995). On the contrary, male officers think female officers are overprotected, questioning their actual ability to adequately police (Remmington, 1983). Sexual harassment, teasing, and flirting are common occurrences on the job. Similarly, Thompson, Kirk, and Brown (2005) found that female officers are unlikely to seek help from male officers because they are reluctant to be seen as feeble and incompetent.

**Presentation of negative stimuli**

With a steady growth of negative effects, officers eventually suffer physical, mental, and/or emotional health problems. This process soon reaches a point where it can be classified as the psychological disorder known as “burnout” (Veninga & Spradley, 1981).

Dealing with crime and emergencies such as shooting instances and high-speed chase on a daily basis inevitably creates a stressful occupational environment for officers. Dangerous and fearful events, as well as serious injury or death of a colleague or civilian, are stressors often seen in a long continuous police work environment (Stotland, 1991). While these events are only momentary, long-term effects such as post-traumatic stress disorder can arise (Stephens, Long, & Miller, 1997). Cumulative exposure to traumatic events can have serious effects on mental health (Kureczka, 1996).

The police occupation is characterized with strong exposure to negative stimuli including psychic-battering, continual conflicts, violence, and fear. Even when technically off duty, officers still carry the role as a protector or crime-fighter, exposing them to unknown dangers 24 hours a day. At other times, police work can be boring and require contact with misery and death. These characteristics of police works are
potential factors of police stressors (Ellison, 2004; Spielberger, Westberry, Grier, & Greefield, 1981).

Along with occupational stressors, officers face many negative stimuli in the form of organizational stressors. Many publications have shown that the organizational stressors and administrative practices of the department consistently create the most significant stress (Hart, Wearing, & Headey, 1995; Storch & Panzarella, 1996; Wilson, Harris, & McLaren, 1997). Kohan and Mazmanian (2003) claimed that organizational characteristics are more likely to have a significantly higher effect on police officer burnout than occupational characteristics. Scholars have also reported that the police organization has a huge influence on police misconduct (Klockars, Kutnjak Ivkovic, & Haberfeld, 2004; Sherman, 1978). Harsh administrative orders or lack of support from management is a significant stressor for police officers (Brown & Campbell, 1994; Morash, Haar, & Kwak, 2006).

While officers may appear to be of high rank in communities, the central bureaucracy still continuously and meticulously controls them. Such a process creates a system of discipline that has been criticized for its propensity to create more stress in the organization and to discourage officers from working hard (Sparrow, Moore, & Kennedy, 1990). Therefore, it can be argued that it is the administration itself that plays an important role in creating stress.

Uncooperative coworkers also may cause a stressful work environment. Discords between males and females, as well as the detective division and patrol officers are frequent stressors. Furthermore, officers have to deal with organizational budget constraints creating a stressful environment.
Removal of positive stimuli

Agnew suggested that the removal of positive stimuli, such as the loss of a coworker or having little time for family, is another strain that can result in problematic behavior. Agnew (1985) argued that, aside from stress caused by failure to achieve positive goals and presentation of negative stimuli, police officers are frequently under stress when positive stimuli are removed from their working environment. Officers may feel stress because they “lose” something they have worked for or built.

Officers do shift work (e.g., night shift) and experience personnel shortages and long working hours with time pressures which are reported as police stressors (Brown & Campbell, 1994). Officers must respond to crime scene even if they are not on duty at that time. Officers are also confronted with the confidential nature of their work. Therefore, officers experience difficulty when trying to socialize with their friends, relatives, and other people outside the police force (Maynard, Maynard, McCubbin, & Shao, 1980) and feel isolated from citizens (Daniello, 2011).

Burke (1994) claimed that the combination of work responsibilities and family obligations leads to stress. Police officers are often absent from the home during significant times, resulting in a damage to their family unit. Sometimes officers may bring home their work stress. Their negative emotions, such as anxiety and fear from dangerous work, can escalate the irritability and anxiety within their family members, leading to loss of positive personal interactions. Even though many officers want to spend more happy time with their family, many experience unhappy marriages (Alkus & Padesky, 1983). This shows that stressful work environments influence family obligations and private socialization, as well as loss of positively valued stimuli.
Many officers are forced to socialize on the job and show their loyalty to the department by relying on each other. They share important information only with other police officers, leading to an “us-versus-them” attitude toward society (Paoline, 2003).

In public relations, media coverage is a source of police stress (Abdollahi, 2002). The press tends to distort events, and this detracts from the public image of police. The attitude of the press can very easily lead to hostile environments for police, resulting in the removal of positive stimuli.

Police work is unique in that it forces officers to become habituated to violence. However, facing violence daily does not make one immune to the suffering of others (Toch, Bailey & Floss, 2002). Dealing with child abuse, death, victims of violent crimes and their families, multiple fatalities, informing relatives of sudden death, and death of a colleague at work are all tragic situations (Brown & Campbell, 1994). Scholars claim that a particular psychological and physiological reaction occurs in police officers when engaging in these powerful and significant incidents (Bryant, 1990; Mitchell & Everly, 1993; Reese, Horn, & Dunning, 1991).

**Summary**

With all of these above-mentioned stressors, it is not surprising that many officers develop mechanisms for dealing with stress. Some police officers know how to defuse their stress or have become immune to stressful life events that occur because of their work. Police stress not ventilated appropriately can cause long-term development of stress symptoms. Therefore, a wide variety of coping mechanisms is essential for mitigating suppressed police stress. Those who experience more anger and strain are more likely to use illegitimate coping mechanisms such as delinquency (Broidy, 2001; Capowich et al., 2001; Piquero & Sealock, 2000). Even though the studies of police
stress have been conducted with great significance, there has unfortunately been no research on police misconduct based on the exact theoretical framework of GTS with its main strains, negative emotions, and conditioning variables together. This paper aims to study Agnew’s (1992) GST and its relationship with police stressors to create an organizing framework for understanding police misconduct.

Although the array of physiological, psychological, and behavioral consequences is broad and concerning, there are few studies concerning the relationship between police stress and coping strategies (Beehr, Johnson, & Nieva, 1995; Haarr & Morash, 1999). We do know that officers use maladaptive coping strategies to respond to police operational or organizational stressors in order to deal with their negative emotional responses. Therefore, it is important that we address stress and use it as a method to eliminate or reduce police misconduct (Amaranto, Steinberg, Castellano, & Mitchell, 2003). Many misconduct studies have demonstrated that officers committing misconduct may have specific behavioral patterns or attitudes relating to police work or culture (Fyfe & Kane, 2006). However, prior studies have not attempted to use a theoretical framework to explain police stress and misconduct or other behavioral issues.

From these reviews, determining how GST can be applied to police misconduct is not difficult. It is clear that the stressful events endured, and the following negative emotions, ignite police misconduct because police work characteristics and stressors can strongly predict officers’ behaviors and culture. This unique relationship can allow researchers to use GST to examine the causes of police misconduct. Abdollahi (2002) strongly suggests research on police stress should not continuously be based on
exploratory studies, but rather be theoretically driven. With a theoretical framework, such as GST, strains of policing can be better identified, so that researchers may determine the origin of stress.

**Police Misconduct Research**

**Influence of police culture**

The police have distinctive norms and beliefs, which combined are known as police culture (Loftus, 2009). Police culture determines officers’ behaviors and is a kind of coping behavior which is utilized to diffuse stress (Terrill, Alpert, Dunham, & Smith, 2003). There are double-sided characters in police work. While the role of the police is to protect citizens’ liberties with granted legal power, at the same time their misconduct could be an ultimate threat to citizens’ liberties at the same time (Kappeler, Sluder, & Alpert, 1998). Police discretionary powers that are authorized by law tend to be violated rather easily due to the invincible authority of officers in the field. These special work environments generate a police culture.

The emergence of police misconduct has been linked to the onset of a distinct police culture. Throughout the employment process, officers’ learning is solidified by training and peer association, causing a homogenous cohort conforming to middle class norms and values (Kappeler et al., 1998). Thus, police work experiences and education contribute to an officer’s personality, identity, and perspective (Skolnick, 1975) and lead to the police culture. There are two categories in police culture.

**Occupational culture.** The everyday interaction and policing of different citizens in different communities results in collective values and norms that become pervasive in the departments and define police culture. Beehr et al. (1995) reported that operational stressors, such as threats, violence, exposure to danger, and task related factors
contribute to the police culture. Given the nature of policing, almost all officers are put in situations that have the potential for danger (Paoline, 2003, Skolnick, 1975). High exposure to the threat of danger increases the chance that an officer will use force to maintain power in a threatening situation. In addition to responding to danger, officers can exhibit coercive authority (Paoline, 2003). Police think any limitation to their autonomy or discretion is an impairment of their authority to control crime (Kappeler et al., 1998).

Organizational culture. Organizational stressors, such as autocratic management, lack of support, poor communication (Beehr et al., 1995; Manzoni & Eisner, 2006), role conflict, role ambiguity, and situational constraints (Adams & Buck, 2010), all make up the organizational work culture. Organizational bureaucratic regulation empowers officers’ tactics, duties, and responsibilities differently based on the positions or ranks in police organization. This division in police departments tends to drive officers to develop solidarity inside their own units (Kappeler et al., 1998). Strict supervision scrutiny or fear of possible sanctions can make officers reluctant to commit acts of deviance and requires officers to develop coping mechanisms. The adoption of a lay-low of CYA (cover your ass) attitude (Paoline, 2003) is one such coping mechanism that prevents officers from partaking in activities that could bring unwanted attention to themselves (Herbert, 1998; Prenzler, 1997). Additionally, taking on a crime-fighter orientation presents an officer with positive-recognition opportunities from supervisors and thus reduces the officer’s role ambiguity. Both the environment and coping mechanisms eventually produce the outcomes of social isolation and group loyalty, or separation between police and the citizens they serve, and dependence on other police
officers for both protection and support generating from the uncertainty, danger, and anxiety encountered in their jobs (Manning, 1995).

In sum, police culture originates from a unique occupational or organizational environment. Unfortunately, the term police culture has been tarnished and labeled as having negative values, norms, and practices apparent among officers (Reiner, 2010). Prior studies make it clear to us that police misconduct takes place in relation to police cultural characteristics, which are often hiding in the background unnoticed. Therefore, it is necessary that police culture is understood before examining police misconduct and its etiology.

**Definition of police misconduct**

The forms of police misconduct include police crime, police corruption, and abuse of authority. Police crime is violation of criminal laws by officers (Kappeler et al., 1998). Police corruption is use of his/her authority to make a profit (Sherman, 1978). Lastly, abuse of authority involves physical, psychological, and legal abuse utilizing police authority (Kappeler et al., 1998). The difference between definitions of police misconduct has not been clearly recognized among scholars, and the categories can overlap. For the purpose of this study, the broad meaning covering all types of police misconduct will be used.

Garner, Maxwell, and Heraux (2002) reported that a diversity of literature has measured misconduct by studying tactics and weapon use, personal narratives of independent observers, analyses of official records, complaints of police use of force, surveys of officers or arrested persons, observations of police behaviors, and general surveys.
To date, there have been inconsistent ways that research studies have evaluated police misconduct. Some scholars have focused on police use of force. But these studies utilized diverse variables to measure excessive force. For example, Garner, Buchanan, Schade, and Hepburn (1996) utilized adult custody arrest data, while Lundstrom and Mullan (1987) collected traffic arrests, warrants, and incidents where officers placed criminals in detention. Garner et al. (1996) and Klinger (1995) equated police use of force with weaponless tactics and verbal threats, while Croft (1985) measured force with the use of weapons. Bazley, Lersch, and Mieczkowski (2006) examined the frequency and types of force and resistance focusing on the differences between rank, specifically, detectives versus patrol officers. Unexpectedly, the authors found that detectives use more force than patrol officers. Kavanagh (1994) recognized that police use of force was the same as police allegations of suspects’ resistance.

As studied until now, in addition to the discrepancy of related variables used to measure police use of force, prior researches have not been consistent in defining different levels of force. For example, Worden (1995) examined instances of excessive or improper force for his measurement of use of force level. Garner et al. (1996) presented three categories of the use of force by officers in the Phoenix Police Department: physical force, the continuum of force, and maximum force. Within continuum use of force, the authors employed seven subcategories, and they graded maximum force on a scale of 1-100 severity levels. Terrill (2001) used a 10-category measure from no force to “strikes with external mechanism.” In 2002, Terrill and Mastrofski (2002) consolidated the ten categories into four.
Frequencies or rates of force vary among studies, because sometimes frequency depends on the definition of force used or the sample characteristics. For example, Langan, Greenfield, Smith, Durose, and Levin (2001) showed 0.8 percent of police use of force rates from police-citizen encounter situations. On the other hand, Terrill and Mastrofski (2002) demonstrated approximately 60 percent chance of police use of force including verbal threats or physical force with broad measurement according to the severity of harm.

Lately, many scholars studying police misconduct have used citizen complaints as a measurement for police misconduct (Harris, 2011; Kane & White, 2009; Lersch, Bazley, & Mieczkowski, 2006; McCluskey & Terrill, 2005; Worden, McGreevy, Catlin-Dorn, Harris, & Schlie, 2003). This method allows for a solid analysis of deviant behaviors and the results of these behaviors. Lersch (2002) argued that citizens generally report complaints when officers are rude and disrespectful and show unsatisfying work performance, whereas crime reported by the media or internal affair units generally involves higher profile cases.

The prevalence of internally detected misconduct cases has not been obvious. Kane and White (2009) examined the career histories of New York Police Department officers to better understand why they were released from the department for misconduct. They analyzed a sample of 1,543 police officers serving between 1975 and 1996 with official personnel and performance appraisal data. Kane and Whites (2009) classified the misconduct of the officers according to seven specific types: 1) obstruction of justice 2) inability to perform 3) profit-motivated crime 4) off-duty crime 5) drug use 6) on-duty misconduct and 7) any failure to adhere to probationary measures on duty.
They found certain predicting factors, which include race and ethnicity of the officer, level of education, prior criminal records, lack of experience in the work field, poor relationships with citizens, and a failure to be promoted within the New York Police Department. Sherman (1985) proposed that police misconduct is a “slippery slope” because officers committing minor misconduct are more likely to commit serious misconduct later.

In recent years, some studies have researched misconduct from a theoretical perspective. Initially, several researchers used criminological theory, such as social disorganization theory (Kane, 2002; Terrill & Reisig, 2003) and social learning theory (Chappell & Piquero, 2004). Kane (2002) examined police misconduct in the context of socially disorganized communities and found that population mobility and structural disadvantage were predictors of police misconduct. Harris’ (2012) unique approach to explain police misconduct used Residual Career Length (RCL) and Residual Number of Offenses (RNO), which originated from life course theory. The author checked the change of police misconduct over time and whether career features could predict future misconduct by comparing with Early Intervention (EI) system criteria. The author used four categories: years of experience, number of complaints, time since the last complaint, and onset of the first complaint. The findings were that the career features of RCL and RNO could moderately predict future misconduct and were better than the EI system.

There have also been several studies using GST to examine police misconduct. Gibson et al. (2001) applied the GST to officers’ domestic violence using data from the Baltimore police. They found that strains (job dissatisfaction and negative work-related
events) have an impact on domestic violence only through negative emotions (anger and depression). Also, they did not observe conditioning effects of social support and spiritual coping. With the same Baltimore police data, Swatt et al. (2007) examined officers’ alcohol abuse using measurements similar to those of Gibson et al.’s (2001) study. They found that police work strains are correlated with negative affects and that strains are mediated with alcohol abuse by the negative affects. In addition, Arter (2007) examined qualitative data of 32 officers in two metropolitan police departments and found that officers reporting high levels of job stress showed a higher level of deviant responses. This study, however, did not differentiate between the types of strains as in the GST. None of the three studies measured police misconduct as a dependent variable, nor did they include the three main GST strains and diverse coping strategies. Until now, no study has examined police misconduct based on the GST’s three main strains, negative emotions, and diverse coping strategies.

**Dimensions of police misconduct**

The purpose of the present study is to examine police misconduct within the context of Agnew’s (1992) GST. Prior to this study, no study has evaluated police misconduct considering Angew’s three strains as well as the responsive negative effects. GST is focused at the socio-psychological perspective and takes into account environmental, cultural, and individual factors, as well as mediating strategies (Arter, 2007). It is important understand how recent findings on police misconduct relate to GST. To clearly review the prior studies, the standard of division criteria was determined by King’s (2009) notions that police officer misconduct is the result of three factors: individual officer attributes, community or ecological factors, and organizational factors.
**Individual level.** All three of Agnew’s (1992) strains are highly relatable to individual-level police misconduct. Police officers can be easily affected by the values and expectations surrounding them, resulting in changes to the goals, beliefs and behaviors of the officer. Certain types of stressors, such as night shifts and dangerous working environments, can cause police officers’ friendships, trust, culture, and perspectives about the world to vary greatly from those of the ordinary citizen, creating the isolation between police officers and citizens.

Cohen and Chaiken (1972) discovered that the relationship of administrative rule violations with dismissal records of prior occupations and military disciplines were significant in predicting misconduct. Officers with prior infringements can be viewed as criminals in the police agency, leading to possible isolation or victimization.

Psychological theories also propose that the police officers’ personal characteristics will affect their behaviors. Aggressive police officers are more likely to cause citizen complaints (Brandl, Stroshine, & Frank, 2001; Worden, 1989). Brandl et al. (2001) analyzed the number of arrests of complaint-prone officers. After considering several police officer characteristics (sex, race, education, age, and length of service), officers’ assignments and patrol areas, total arrests, and total excessive force complaints, they demonstrated that police officers exercising more arrests are more likely to generate excessive force by citizens. In a similar way, Terrill and McCluskey (2002) compared the activities of problematic officers and non-problematic officers and found that problematic officers are more likely to generate citizen complaints of police misconduct. Officers who are prone to misconduct are likely to experience negative effects more easily than officers who experience little to no misconduct.
In addition to Brandl et al. (2001), many researchers have also found relationships with individual characteristics, such as age (Greene, Piquero, Hickman, & Lawton, 2004), gender (Greene et al., 2004), race (Greene et al., 2004; Kane & White, 2009; Rojek & Decker, 2009), education (Kane & White, 2009), length of service (Micucci & Gomme, 2005), rank (Hickman, Piquero, & Piquero, 2004), prior employment problems (Greene et al., 2004; Kane & White, 2009), and criminal history (Greene et al., 2004; Kane & White, 2009), with police misconduct.

Previous research has shown that female officers are less likely than male officers to be the subject of citizen complaints (Brandl et al., 2001; Lersch, 1998; Lersch & Mieczkowski, 1996; McElvain & Kposowa, 2004). Females are typically less aggressive than males and tend to be high in constraint. It is also possible that females are more protected by the administration, resulting in less negative stimuli.

**Community level.** Community level stressors typically arise from the presentation of negative stimuli. Agnew (1999) claims that the varying levels of social control and intent to commit a crime contribute to the different levels of crime rates in communities. Because each community is made up of different characteristics, which create different environments that impact each resident differently, individuals face different levels of strain depending on where they live. Individuals may experience failure of achieving goals, removal of positive stimuli, and presentation of negative stimuli that can increase levels of strain, which then evolve into emotions of anger and frustration. These emotions can be rampant in certain neighborhoods, and nonexistent in others.
Many scholars have started to focus on the neighborhood’s effect on police officers’ behavior (Klinger 1997; Mastrofski, Reisig, & McCluskey, 2002). Scholars have argued that police officers are more likely to be aggressive (e.g., stopping citizens and using force) and punitive (e.g., making arrest) when enforcing the law in lower level and highly-rated crime neighborhoods (Bayley & Mendelsohn, 1969). Black (1976) assumed that police officer may be harsher toward suspects in a more disadvantaged economic or cultural status, such as the poor, minorities, and the young. Smith (1986) analyzed police behavior and neighborhood characteristics using data from sixty neighborhoods in three U.S. cities and found that police use of force is related not to the individual race but to the racial composition of neighborhoods. Also, Terrill and Reisig (2003) claimed that police officers are more likely to use police force if they encounter criminal suspects in highly-rated crime districts and highly concentrated disadvantaged neighborhoods.

According to police culture theory, many officers enter low-class communities with a “maintaining the edge” (Paoline, 2003) mentality. Officers expect to encounter trouble in these areas, so they act more aggressively, which could result in increasing the rate of misconduct in these areas. Adverse environments (lower economic neighborhoods), mixed with a repeated exposure to negative stimuli (rampant crime) are positively correlated with police misconduct (Agnew 1985, 1989, 1992; Agnew & White, 1992).

Jackson (1989) used the “minority group threat hypothesis” to explain police use of force at the municipal level, arguing that increases in minority residential populations may pose a perceived threat to a dominant group. Therefore, it causes the over-deployment of police and more coercive police policies. Jacobs and O’Brien (1998) also
supported this argument with claims that police-citizen conflict caused by economic inequalities and variation in racial composition is related to police deadly force. Officers' misconduct can be related to fear of losing a community to a minority group.

More recently, Kane (2002) examined if the social and ecological conditions in the New York City police precincts and divisions were related to police misconduct. He used a retrospective longitudinal research design including officers from 1975 to 1996. Using different levels of misconduct including bribery, extortion, excessive force, administrative rule violation, and other abuses of police authority, he found that structural disadvantage and population mobility explained changes in police misconduct over time.

Additionally, according to Agnew’s GST, adverse work environments, including both operational and organizational environments, (Agnew 1985, 1989) have been shown to directly relate to delinquency. Friedrich (1980) found that the observation by peers and the public of the offender’s behavior during an encounter had a significant impact on police use of force. Officers are typically hesitant to engage in misconduct when others are watching because they do not want to lose positive stimuli, such as admiration or mutual trust.

**Organizational level.** Police officers normally work alone or in pairs and patrol around a large area with little or no direct supervision (Walker, 1992). Most of the police-citizen contacts happen without administrative supervision, such as in alleys, deserted street, and private residences. The emphasis of the police organization is on lowering visibility of patrol activities and increasing the supervision and control of
administrative positions. Studies concerning the correlation of organization to police use of force is rare.

However, scholars have reported that police organization is an important factor when studying police misconduct (Klockars et al., 2004; Sherman, 1978). In particular, Klockars et al. (2004) assumed that police organizations could prevent police misconduct by creating rules and surveillance mechanisms, punishing wrongdoers, and dismantling the blue wall of silence.

Wolfe and Piquero (2011) examined the relationship between organizational level variables (distributive, procedural, and interactional), code-of-silence attitudes and noble-cause beliefs, and police misconduct with the data from 499 police officers in the Philadelphia Police Department Officers in 2000. In accordance with the principles of GST, the authors found that police in fair and just managerial practices were not inclined to support the code of silence attitudes and noble-cause beliefs. Also these officers are less likely to be involved in incidents of police misconduct. Agnew (1992) reported that perceptions of inequity and unjust treatment have led to delinquency. Officers who found the administration just would be less likely to partake in police misconduct, while those who believed the organization was unfair and favored certain officers, would be more likely to act out through police deviance.

**Demographic variables.**

This section includes prior research that studied the relationship between certain demographic variables, working experience, rank, and education, to predict police misconduct.

**Working experience.** Terrill and Mastrofski (2002) found that less-educated and inexperienced officers were more likely to use unnecessary force. Other scholars
reported that more experienced officers received fewer citizen complaints (Brandl et al., 2001; Lersch & Mieczkowski, 1996; Paoline & Terrill, 2007). Harris (2012) reported that as officers gained experience, the length of time they engaged in misconduct declined. Vitale (2014) similarly reported that increased years on the job acted as a protector from police misconduct. Inexperienced officers are typically less likely to receive a promotion, even though they feel they are being productive, and they are also more likely to be patrol officers, which means they are more likely to be exposed to negative stimuli.

**Rank.** Vitale (2014) reported that achieving a supervisory rank acted as a protector from misconduct. Kang and Nalla (2011) reported that officers were more likely to have positive attitudes toward civilian oversight. White and Kane (2013) similarly determined that those who advanced through departmental ranks were less likely to be involved in significant career-ending misconduct. Son and Rome (2004) agreed by suggesting that police officers that have achieved a non-supervisory status are more likely to engage in and observe minor types of misconduct (e.g., speeding, free meals, and flashing a badge).

**Education.** Research has shown that higher levels of education are correlated with lower levels of police misconduct (Aamodt, 2004; Chapman, 2012; Harris, 2014; McElvain & Kposowa, 2008; Paoline & Terrill, 2007; Vitale, 2014). Higher education is valued among police officers and considered during the hiring process due to the notion that an officer can better communicate with the community if s/he has received a higher education (Klockars et al., 2004). Education also increases a person’s tolerance for difference and cultural diversity (Micucci & Gomme, 2005).
Summary

While past studies in police misconduct were conducted in considerably diverse approaches, none have demonstrated the causal relationships of Agnew’s three types of strain and police misconduct. Many studies have proven that being a police officer is one of the most stressful jobs (Territo & Vetter, 1981), but police stress has not been examined with GST. While studies have reported many findings about police misconduct, the focus should be more on what types of strain or stress cause this misconduct.
CHAPTER 4
SOUTH KOREAN CONTEXT

Cultural Understanding of South Korea

Agnew (2015) noted the distinct features of Asian societies that must be considered when applying GST to individuals within the oriental community. These features are based around Confucian tradition, which includes values of social harmony, personal self-restraint, and a strong focus on family and education.

Importantly, it should be acknowledged that there has not been much information regarding whether South Korean officers share the general cultural characteristics of the general South Korean people. Similarly, there has not been sufficient information about the differences of police culture in South Korea and the US. It is difficult to evaluate such cultural differences. However, Frederking (2004) argued that the law and norms in a country play important roles in building an organizational culture. Therefore, this study assumes that the cultural characteristics of South Korean officers are not much different from those of the general South Korean people. Thus, South Korean police culture may not be same as that of the US police.

Chapter 4 describes how GST can be used to analyze Eastern collectivist societies just as it has been used to analyze Western societies. The following sections will explain how certain strains are more prevalent depending on the cultural context.

Confucianism’s Influence

Chung (2013) and Zhang, Lin, Nonaka, and Beom (2005) argued that the democratic South Korean society has deep-rooted Confucian values, which must be taken into consideration to understand Asian culture. Hofstede and Bond (1988) emphasized that Confucian dynamism is a key cultural characteristic and expounded
that the Confucian values are related to persistence, future-oriented mentality, status-ordered relationships, interrelatedness, and emphasis on thrift and shame. A key Confucian belief is that individuals live in accord with other people, and cherish this societal quality (Bond & Hwang, 1986). Similarly, Moore (1967) expressed that individuals are never imagined as a secluded entity, but rather as reciprocal things.

Due to Confucianism’s heavy impact, the removal of positive stimuli strains are predicted to be the most prevalent in Asian societies. Agnew (1992) argued that the loss of potential reward would generate greater pain than failure to achieve positive goals. It is known, as a broad generalization, that Asians cherish Confucian values and focus on implementing social harmony through their family, parents, and education (Cheung & Cheung, 2008; Zhang, 2008; Zhang & Messner, 1995). These values are likely to impact the conditions of strains that lead to deviance in an individual. Sung (1999) claimed that South Korean culture treats family as the essential element in society. The focal importance of filial piety lies in dealing with elders and relatives with respect. It is a mandatory commitment. Therefore, yielding one’s own particular objectives and supplanting them with familial objectives is common in South Korean culture. Loss of family respect, expulsion from school and conflicts with important others (removal of positive stimuli strains) could result in high strain levels in Asian individuals (Lin, 2012; Moon, Morash, et al., 2009).

When considering how appropriate GST will be for predicting misconduct, specifically with the disjunction between expectation and actual achievement or just/fair outcome and actual outcome strains, it is important to understand that there are cultural differences on how goal blockage and injustice are perceived in Asian and Western
societies. Asian countries favor "high power distance," meaning that great discrepancies in power are prevalent without the need for justification.

Hofstede (2001) explained that large power-distance societies are characterized by centralized authority, hierarchical levels, paternalistic management style, despotic leadership, and acceptance of privilege of power. He reported that the power-distance ranking of South Korea is much higher than that of the United States, as shown in Figure 4-1. It is not surprising then that Asians perceive treatment by an authority figure and/or public official as less unjust than westerners, reducing injustice strains in Asian societies (Leung & Bond, 1982).

![Figure 4-1. Comparison of Societal Characteristics of South Korea and the United States. Source: http://geert-hofstede.com/south-korea.html](image)

More research is needed to create a reliable and permanent statement about goal blockage and injustice in both Western and Asian societies. While some may view their inappropriate treatment as a necessary predicament of their fate or destiny in life (Lin, 2012), constant exposure to failure and unjust treatment could lead to other strains resulting in depression or frustration.

**Individualism and Collectivism in Culture**

The distinction between the way of life in Western culture and that of Asian society is found in the differences between individualism and collectivism, which are
characterized as frameworks of implications, practices, and social organizations where emotions are known to be variant (Mesquita, 2001). Western societies are depicted as individualistic emphasizing autonomy, independence, freedom, and individual accomplishment (Markus & Kitayama, 1991) and give more importance to individuals' objectives over others' objectives (Chun, Moos, & Cronkite, 2005; Hofstede, 2001; Triandis, 1995). Conversely, in Eastern societies, more importance has been placed on the individual to keep up fundamental relationships with others (Markus & Kitayama, 1991) emphasizing commitment, interdependent activity, and satisfaction in suppressing an individual's aim. de Tocqueville (1835/1969) remarked that the United States is an especially individualistic society (Bellah et al., 2007). Interestingly, South Korean society has been depicted as an especially collectivistic society (Ho & Chiu, 1994; Leung & Bond, 1982; Park, Rehg, & Lee, 2005).

Unlike western countries, which are frequently characterized by religious freedom and contain a melting pot of religious communities, the unwavering influence of Confucianism in Asian societies has undoubtedly played a role in the collective culture that has emerged over time. In the present study, culture will be defined in such a way that it will incorporate imparted standards, beliefs, and values that guide the conduct of people in a society (Hofstede, 2001).

Comparing South Korea to the US, Rhee (2002) reported that South Koreans cherish group-focused notions, while Kim and Choi (1994) demonstrated that in the US people were unequivocally urged to depart from their credited connections such as family members.
Collectivist societies, which are very much based on Confucianism, will most likely reveal high levels of strain resulting from removal of positive stimuli. Eastern societies also experience strains due to failure to achieve positive goals strains, but these strains are more likely to be brought out by failure to retain respectful relationships and harmony among peers. Thus, it is expected that GST will be of equal use in studying misconduct in Asian societies and will reveal different results compared to previous studies of deviance in Western societies.

The coexistence of Confucianism and collectivism is a critical element in the cultural contrast of South Korea and the United States. With this in mind, it is evident that more cross-national research is needed to further evaluate the impact of negative events on criminal behavior (Agnew, 2015). With these studies, the scope and etiology of the different evaluations and effects on delinquency of various events can be clarified.

**South Korean Context Regarding Police**

The Korean police consists of the police headquarters, the Korean National Police Agency (KNPA), 16 local police agencies, 250 police stations, 1,436 patrol divisions, 512 police boxes over the country (KNPA, 2013). The number of total sworn officers is 103,540. Among them, there are 8,093 female officers (7.8 percent).

Regarding its hierarchical organization, there is a total of eleven ranks. In order from lowest to highest, the number of members of each rank are as follows: officer, 10,390 (10.0 percent); senior police officer, 12,980 (12.5 percent); assistant inspector, 30,529 (29.5 percent); inspector, 41,385 (40.0 percent); senior inspector, 5,778 (5.6 percent); superintendent, 1,900 (1.9 percent); and senior superintendent and higher 578 (0.5 percent). Thus, the KNPA is a bell-shaped hierarchical organization.
The South Korean police has standardized oversight, with all agencies following the same codes of conduct administered by the KNPA headquarters. The essential developments, and the associations’ levels of leadership, are homogeneous everywhere throughout the nation. The police organization is one of the most hierarchical structures and bureaucratic associations in Korea, leading to political battles for control of the police organization. With this political and financial power, the party supported by the police organization will carry much more power within the country. This one-sided situation has long been criticized by citizen representatives and researchers.

The Korean police association differs from that of the western police because it is a large paramilitary entity with solid rules and mandates (Hoffman, 1993). Importantly, the Korean police have been perceived as one of the four agencies that hold government power in South Korea, along with the National Intelligence Service, Prosecutors’ Office, and National Tax Agency.

Unfortunately, as seen over and over in history, institutions with great power often fall into corruption. One explanation of the high levels of corruption within the police force lies in South Korea’s religious beliefs embedded in Confucianism. The inability to display aggression, as is taught by the principals of Confucianism, may lead to more organizational corruption, like bribery and noble cause beliefs, given that officers do not want their misconduct to be seen. Alongside its strong police agencies, Korea has built a formal criminal justice system that coincides with the informal social-control framework based on a long Confucian social custom (Joo, 2003; Yoon, 1998). Unlike the Western philosophy of liberation from power and authority, Korean social
customs, influenced by Confucianism, have encouraged adjusting to authority rather than fighting it (Joo, 2003). For this reason, corruption is hard to eradicate.

There are, however, many duties of the Korean police that are comparative with those of western nations: investigation of crime, control of demonstrators, patrolling, traffic control, and gathering and investigating data. However, civilians see the Korean police as a politically-oriented unit that always supports the national tenets of the party in power. The following sections present an historical account of how the South Korean police became this way.

**Early stage.** In the fourteenth century, the first Korean police unit was established as an armed force. It was a comparatively well-organized and functioning unit, even at controlling government officers’ corruption and morality. In the 1500s, the police changed into a military unit, which lasted until the 1900s when the Japanese took control of South Korea (Hoffman, 1982).

The modern KNPA can trace its roots to the Japanese occupation, which lasted from 1910-1945, when the Japanese introduced the Police Administration Office. Serving under the guise of a police force, the real aim of this organization was to enslave the Korean people (Hoffman, 1984). As a result, generations of Koreans, historically deprived of the peace-keeping function of a police force, generally view the police with distrust (Hoffman, 1993).

The Japanese police force introduced in this period (1910-1945) predominantly depended on brute force. Over time, police domination broadened and became involved in governmental issues, monetary matters, educational training, morality, and public welfare (Hoffman, 1993). The police force was very effective in these endeavors
because of its highly centralized and pyramid-style framework (Park, 1988). Under this force, most Koreans were watched by the police and prohibited from joining anti-Japanese movements (Park, 1988). In this manner, it became accepted that the Korean police were an advanced guard for sustaining the Japanese colonization (Cheong & Yun, 2011; Hoffman, 1982).

South Korea’s present police agency was introduced after WWII in 1945, when the Independent Republic of Korea. The police force was managed by the US Army Government until 1948 (Hoffman, 1982). After the turmoil of the Japanese invasion, the main role of this new police force was national security.

While the police framework was redesigned after Korea was freed from Japan, it still maintained many of the prior policing roles as an advanced guard for preserving the ruling party. Shortly after the restructuring, police battled closely with the military during the Korean War (1950-53), conducting military actions against guerrilla operations from North Korean armies. In 1953, the war ended, but the police still faced hardships working in a devastated country with foreign troops under the constant threat of a North Korean attack.

As a result of this threat, the South Korean government took full control over the police and increasingly used the force in numerous capacities, both militarily and politically (Myong, 1959). Slowly, as the apparent risk from North Korea reduced, and the government’s move to democracy hastened, the police started to emphasize the importance of a peace-keeping role. South Korea, however, was still governed by a military party, and would be until 1993. With this military government, police power was used to advance government ambitions and suppress citizen’s opinions (Hwang,
McGarrell, & Benson, 2005). In this alliance, the police began to abuse their authority by violating civil rights and interfering with election procedures (Hoffman, 1982). Sadly, this misuse of authority became commonplace during these dictatorial administrations, and the relationship between the police and citizens was devastated. This resulted in great hostility toward the police and their authority was soon lost (Heo, 1998; Nahm, 1988).

An aftereffect of these circumstances was an increase in the public's desire for policing that emphasized human rights, reduced hostile enforcement styles (Pino & Wiatrowski, 2006), and ensured justice through due process (Tyler, 2004). Despite the popular sentiment for positive changes, and in spite of earlier reforms, South Korean police are still not immune to politicalization and the abuse of power through force (Kutnjak Ivkovic & Kang, 2012): a full century after the start of the Japanese occupation, the force is still controlled by the government (Moon, 2004).

**Transition period.** Even with the devastation from war and rampant corruption, South Korea accomplished remarkable economic achievements in the 1960s and converted from an agricultural society to a mostly industrial society. However, the relationship between the Korean police and citizens remained tense due to citizens’ distrust in the Korean government. Lacking legitimacy in an unstable political environment, the Korean government depended on protection by police and military forces.

As a result, the main roles of the Korean police have been control and suppression of anti-government groups and the regime’s political rivals (Hoffman, 1982). Consequently, the Korean police continued to be distrusted by citizens and exploited for the political gains of the majority parties, as they had been many times
before. Unfortunately, this tense and demanding environment weakened the innovative endeavors of the Korean police and created a hierarchical semi-military organization and authoritative law enforcement, resulting in increased violation of civil rights and deep-seated corruption (Pyo, 2002).

**New reform efforts.** In 1999, the new Commissioner General of Korean police, Moo-Young Lee, tried an unprecedented organizational and cultural reform for the Korean police, called “The Grand Reform.” The main targets of this reform effort included the police system, police culture, and police practices (Pyo, 2003). Chief Lee attempted to re-establish the entity of the police force itself by addressing different facets of law enforcement: police work, public image, organizational culture of justice, and chronic corruption. He projected blueprints for each goal, suggesting that the driving force of the reform effort could originate from both a healthy organizational culture and justice based on mutual trust. He suggested clearing away outdated customs to accelerate the enhancement of law enforcement and public service activities. He also hoped to improve the public image of the police, which had been deeply tarnished over the years (KNPA, 2002). This approach was different from the one-sided, authoritative, pressing initiatives administrated by prior Korean police chiefs.

The Grand Reform constituted two phases. The first was to reinforce organizational satisfaction and strengthen organizational culture with pay raises, work shift improvements, and bottom-up management. After building an active and positive police organization, the second step was to upgrade the citizens’ relationship with the police. This included promoting law enforcement and service activities and ensuring procedural justice and fair public administration, which were some of the main demands
from citizens (Pyo, 2002). Finally, and most importantly, the reform efforts were meant to stop police corruption and misconduct for good.

As a result of these endeavors, the Korean National Police has made changes, which are evolving to focus heavily on community policing, increasing the police’s awareness of, and involvement with, the community.

An effective way to measure the improvement of the police force over time is by considering the level of citizen complaints against officers. Prior to The Grand Reform, the internal affairs unit in each respective police precinct office received all citizen complaints. These units, however, did not handle investigations fairly, or receive citizens’ trust, because their decisions tended to be affected by interventions by managerial level officers’ interventions (Baek, 2000). In 2000, after recognizing these problems, the Korean police introduced an independent Audit and Inspection Department (AID), which had offices in each police station. Insulated from the influence of the police officers, the role of the department was to prevent and examine police misconduct and citizens’ complaints (Moon, 2004). While The Grand Reform appears to have had much success regarding public perception, but mitigating internal police corruption and misconduct overall has been difficult (Pyo, 2001). A survey reported that the police agency had been ranked as one of the most corrupt government institutions in South Korea (Lee, 2002).

Nonetheless, Korean police supervisors have implemented a community-policing program emphasizing the public service of police and favorable relationships between police and citizens. Solid initiatives have effectively meshed the police and the
community in crime prevention efforts, in turn improving overall public relations with the police force (Pyo, 2001).

**Still low public support.** In South Korea, laws and regulations dictate police officer conduct. The South Korean Penal Code (2014) details such laws as they pertain to public officials, including police officers. For example, the Code forbids the abandonment of duties (Art. 122), abuse of authority (Art. 123), unlawful arrest or confinement (Art. 124), violence and cruel act (Art. 125), publication of facts of suspected crime (Art. 126), divulgence of official secrets (Art. 127), obstruction of election (Art. 128), and acceptance of bribe and advance acceptance (Art. 129).

The aforementioned AID, implemented with The Grand Reform of the 1990’s, serves as an external, objective source to balance police power. It achieves this end by investigating citizen complaints and internal affairs within each police department throughout the country. Also, AID judges whether a case falls under misconduct categories and recommends appropriate disciplinary actions to the head of the police agency. Despite these changes, citizens continue to mistrust the results of local investigations because they are investigated only by police officers and not a third party (Yang & Lee, 2006). Even in cases in which Audit and Inspection offices decided to investigate police misconduct, most police officers received only a verbal reprimand. Police officers received more severe discipline in roughly 4 percent of investigations (Kutnjak Ivkovic & Kang, 2012). Table 4-1 presents the number of police officers disciplined officially by their agencies from 2005 to 2010.
Table 4-1. Official Cases with discipline by Misconduct Type in South Korea

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (%)</th>
<th>Bribery</th>
<th>Mistreatment of work</th>
<th>Neglect of duty</th>
<th>Injury to dignity</th>
<th>Violation of minor rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>'05</td>
<td>942</td>
<td>96 (10.3)</td>
<td>20 (2.1)</td>
<td>211 (22.4)</td>
<td>169 (17.9)</td>
<td>446 (47.3)</td>
</tr>
<tr>
<td>'06</td>
<td>684</td>
<td>78 (11.4)</td>
<td>19 (2.8)</td>
<td>162 (23.7)</td>
<td>143 (20.9)</td>
<td>282 (41.2)</td>
</tr>
<tr>
<td>'07</td>
<td>580</td>
<td>58 (10.0)</td>
<td>15 (2.6)</td>
<td>156 (26.8)</td>
<td>132 (22.8)</td>
<td>219 (37.8)</td>
</tr>
<tr>
<td>'08</td>
<td>801</td>
<td>72 (9.0)</td>
<td>8 (1.0)</td>
<td>251 (31.3)</td>
<td>140 (17.5)</td>
<td>330 (41.2)</td>
</tr>
<tr>
<td>'09</td>
<td>1,169</td>
<td>179 (15.3)</td>
<td>11 (0.9)</td>
<td>237 (20.3)</td>
<td>280 (24.0)</td>
<td>462 (39.5)</td>
</tr>
<tr>
<td>'10</td>
<td>818</td>
<td>79 (9.7)</td>
<td>44 (5.4)</td>
<td>238 (29.1)</td>
<td>157 (19.2)</td>
<td>300 (36.6)</td>
</tr>
</tbody>
</table>

Overall, 580-1,169 cases were reported every year. Bribery and mistreatment of work comprised a relatively small percentage of the total cases of misconduct (0.9%-15.3%). Neglect of duty, injury to dignity, and violation of minor rules accounted for a larger percentage of the total cases (20.3%-31.3%, 17.5%-24.0%, and 36.6%-47.3%, respectively).

Table 4-2. Number of Disciplined Officers in South Korea

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (%)</th>
<th>Dismissal</th>
<th>Suspension</th>
<th>Decreasing Salary</th>
<th>Written Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>942</td>
<td>185 (19.6)</td>
<td>163 (17.3)</td>
<td>153 (16.3)</td>
<td>441 (46.8)</td>
</tr>
<tr>
<td>2006</td>
<td>684</td>
<td>126 (18.4)</td>
<td>158 (23.1)</td>
<td>112 (16.4)</td>
<td>288 (42.1)</td>
</tr>
<tr>
<td>2007</td>
<td>580</td>
<td>123 (21.2)</td>
<td>120 (20.7)</td>
<td>96 (16.6)</td>
<td>241 (41.5)</td>
</tr>
<tr>
<td>2008</td>
<td>801</td>
<td>194 (24.2)</td>
<td>165 (20.6)</td>
<td>168 (21.0)</td>
<td>274 (34.2)</td>
</tr>
<tr>
<td>2009</td>
<td>1,169</td>
<td>324 (27.7)</td>
<td>209 (17.9)</td>
<td>239 (20.4)</td>
<td>397 (34.0)</td>
</tr>
<tr>
<td>2010</td>
<td>818</td>
<td>159 (19.4)</td>
<td>126 (15.4)</td>
<td>166 (20.3)</td>
<td>367 (44.9)</td>
</tr>
</tbody>
</table>

Table 4-2 presents the official disciplinary actions by the KNPA from 2005 to 2010. The written warning, which is the least serious and most frequent type of disciplinary action, accounted for nearly half of all the disciplinary actions (34.2%-46.8%). The percentages of dismissal, suspension, and decreasing salary disciplinary actions are similar to each other (19.4%-27.7%, 15.4%-23.1%, and 16.3%-21.0%, respectively).
In all, South Korea has undergone many changes to its culture and government that have left both citizens and police stressed and tired. Over the 20th century, South Korea experienced considerable turmoil, but also notable advancement. The Grand Reform allowed, for the first time, an opportunity to cleanse the country of corruption and rebuild the police into a corps of peacekeepers rather than crime fighters. However, this task has proven difficult, and still today statistics are showing that officers are not receiving adequate penalties for wrongdoings and citizen’s trust is still fragile.

**GST in the South Korean Context**

Having such a thorough understanding of the history and culture of South Korea and its police force, it is not difficult to determine, in a social and psychological context, how to analyze the misconduct police force experience. While GST has been applied in a variety of contexts, cross-cultural studies of GST that analyze police behaviors are sparse. Recently, a GST study revealed that there is a major cultural difference in how individuals socially accept and approve of negative emotions, respond to their own negative emotions, and anticipate the outcome of an experienced negative emotion (Horton, Rice, Piquero, & Piquero, 2012). Studying these emotional ranges in South Korean police officers can greatly improve researchers’ ability to determine the root cases for continual misconduct within the police agency. While most Western studies find anger to be a common reaction among individuals, certain cultures find the expression of anger to be offensive or disrespectful. For example, Horton et al. (2012) examined the differences of anger evaluation with Tibetan and American samples and found that Tibetans were more likely to feel bad about expressing anger than Americans and believed that anger can be harmful to others. Findings such as these emphasize the importance for cross-cultural implementation of GST to both understand the specific
causes of misconduct in a culture and to improve the cultural context of GST, making it more reliable for future studies.

**Impact on Stress/Strain**

Stress manifests differently depending on the society. In more individualistic societies, struggles in self-achievement, personal rights, and autonomy are triggers for strain (Chun et al., 2005). A collectivist society, on the other hand, places more value on relational harmony and interdependence. For example, in South Korea, verbal bullying and unpopularity, or being denied a friendship, are very stressful situations for individuals (Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007). Among the strains in GST, these situations are mostly related with the removal of positive stimuli.

In individualistic countries that emphasize autonomy, the relationship between life satisfaction and autonomy are strongly linked. As a result, not achieving autonomy creates a strain, and in line with GST, delinquency is a result of unachieved autonomy (Agnew, 2006). Compared to their Western counterparts who prize independence, it has been reported that South Korean students are more sensitive to refusal of social relationships, and ultimately face strain when they suffer a loss in interdependence (Hui & Villareal, 1989; Yamaguchi, Kuhlman, & Sugimori, 1995).

Other strains include the act of violent victimization, which is more frequent in the South Korean police work environment than in the United States (Cheong & Yun, 2011). Cheong & Yun (2011) suggested that South Korean officers feel stress when encountering verbal or physical assaults from drunken citizens, rather than racial discrimination and threats from disadvantaged neighborhoods, as seen in the United States (Moon & Morash, 2004).
Severe abuse, both verbal and physical, is more tolerated by students and more often imposed by teachers and authoritative figures in South Korea than in the United States (Bao, Haas, Chen, & Pi, 2014; Cheung & Cheung, 2008; Lin & Mieczkowski, 2011; Moon et al., 2008, 2012). In addition, Bao and Haas (2009) explained that political abuse, mainly corruption among public officials and prominent inequality, are also strains that are more frequently occurring and primarily experienced in Eastern societies.

Interestingly, cultural differences in interpersonal relationships can lead to similar ends through different means. For example, Bond, Wan, Leung, and Giacalone (1985) found that a verbal insult in a collectivist culture causes conflict because of aforementioned social protocols that emphasize harmony by encouraging individuals to mind their own business. The same verbal insult in an individualistic culture also creates strain, but it arises from the perceived attack on personal identity.

**Impact on Positive or Negative Emotions**

The socio-cultural environment influences emotion, which can originate from social interactions, and emotions should be evaluated in this context (Frijda & Mesquita, 1994). Similarly, Mesquita, Frijda, and Scherer (1997) argued that the modes, prevalence, and normative reaction to emotion are also culturally different.

Cross-cultural differences occur in individualist and collectivist societies in relation to positive and negative emotions. Individualist societies, especially the US, place a great deal of importance on achieving happiness (Kitayama & Markus, 1999; Markus & Kitayama, 1991). Collectivist cultures, East Asia in particular, take a different approach to this issue. Self-corrective and self-critical attitudes are preferred, because they help align the individual with the greater organization (Lewis, 1995). That does not
mean, however, that positive emotions are not sought or eschewed. The collectivist culture advocates receptivity to both positive and negative events. In a study, Asian students described the emotional events in their lives as neither positive nor negative, but instead, neutral, while American students described emotional events as positive over neutral (Mesquita & Karasawa, 2002).

In a different study, Kitayama, Markus, and Kurokawa (2000) surveyed American and Asian subjects about the frequency at which they experience positive or negative emotions. The American respondents recorded much higher incidences of positive occurrences than negative occurrences. In the Asian respondents, there was no difference between positive and negative event occurrence.

Also, according to Heine et al. (2001) and Oishi and Diener (2001), failure reactions were different among Asians and Americans, even though both preferred positive reactions when experiencing failure. In the event of failure and critical feedback, the Asian students were more motivated than the Americans students to rectify the critiqued work. Americans, conversely, were more motivated only after receiving successful feedback.

The emotional responses could be understood based on their respective cultural heritage (Scherer, Matsumoto, Wallbott, & Kudoh, 1988). For instance, Americans most frequently reported behavioral outputs of blame, aggression, and distancing of relationships. These reactions fit the cultural norms of Western culture, in that they protect self-esteem by rejecting the notion that the negative consequence resulted from personal action and was thereby not deserved. Likewise, anger and aggression are
manifestations of the urge for individual gain, because they attempt to force other individuals to bend to the wishes of the aggressor.

Asian culture, however, focuses on maintaining the relationship (Heine, Lehman, Markus, & Kitayama, 1999; Markus & Kitayama, 1991). With the Japanese emphasis on restoring balance (Weisz, Rothbaum, & Blackburn, 1984), the most common behavioral output was self-blame, essentially a sacrifice of the self in favor of the relationship. If the person was offended, the preferred coping mechanism was to ignore the insult by reducing one's feelings. In this way the self was deemphasized and harmony was maintained.

In conclusion, while frequency of emotional behaviors is consistent across cultures, emotional behaviors appear to be interdependent with the cultural context, (i.e. normal aggression in one culture is excessive in another). In light of these findings, it would seem emotions in a collectivist culture are related to contextual events, while individualist culture emotions are more subjective and intrapersonal (Lutz, 1988).

However, in accordance with Agnew's GST, it should not be ruled out that anger may be the strongest mediating emotion for delinquency. The collectivist Asian culture has been in place for thousands of years. In order to show respect, it is expected that members of Eastern society would choose self-blame over anger out of respect, but it is also possible that in an anonymous survey, like this study, respondents would not feel stress for being criticized by their peers and may feel they are in a safe environment to express feelings of anger or frustration without suffering shame for feeling disrespectful. While it would make sense, based on culture, for depression and anger to be the
leading cause of strain, it is important to understand that anger may still be a mediating emotion, but is underrepresented due to the cultural impact.

**Impact on Coping Behaviors**

Given that the stressors differ, coping behaviors differ as well (Steinberg, Dornbusch, & Brown, 1992). With such distinct conditioning variables in play, a distinct outcome emerges. In addition to the emotions felt across cultures, coping behaviors vary as a result of cultural and legal norms. The same holds true for police organizations, which vary in their structure and practices. In the United States, for example, historical police unionization and grievance procedures are congruous with confrontational actions in handling workplace issues, while Korean culture prohibits the imposition of one’s problems on a co-worker. As a result, coping strategies involving dependence on co-workers do not typically occur (Morash et al., 2008; Morash, Jeong, et al., 2006).

Collectivist and individualist societies employ different coping strategies, with each approach resulting in a unique consequence. In collectivist cultures, studies have shown that harmony-building strategies, like negotiation, are employed, while direct confrontation is the preferred method in individualist societies (Leung, 1987; Leung, Au, Fernandez-Dols, & Iwawaki, 1992). While harmony-building communication reduces immediate strain, it also prolongs it. Direct confrontation, on the other hand, heightens immediate strain, but reduces the period of time it is experienced.

Chun and colleagues (2005) point out that the goal of coping may be different depending on the cultural environment. For example, Western society highlights the need to cope with conflict by eliminating perceived obstacles that impede a desired result, which are usually autonomy and an assertion of individuality. In contrast, Asian
cultures that share a Confucian tradition emphasize the employment of interpersonal resources in conflict resolution.

GST and stress literatures state that a strong self-focus is beneficial when one is under strain, and helps negate the impact of strain (Agnew, 1992; Pearlin, 1989). It is obvious that self-efficacy functions differently in Asian countries when compared to Western countries (Klassen, 2004). Many studies have compared the score levels of self-efficacy of different cultural groups (Eaton & Dembo, 1997; Scholz et al., 2002), and found that self-efficacy in Western countries is higher than that of Asian countries. For example, Asian-American students believed that their parents would not be happy with their school grades, even though the Asian students’ grades were higher than the non-Asian students’ (Whang & Hancock, 1994).

Police coping behavior may vary greatly cross-culturally. Studies of coping used by Western police officers have shown links between police officers’ stress and misconduct (Terry, 1981; Violanti, Marshall, & Howe, 1985). Because coping behaviors are different across cultures and nations, there are implications for the generalizability of theories, how theories explain cultural and national differences, and the plausibility of methods that promote the use of coping strategies by police.

Supporting this notion are prior findings (Morash, Jeong, et al., 2006) suggesting different problems and coping methods in South Korean and American police. In South Korea, there were greater reported incidents of molestation, blame, coworker rejection, and limited advancement opportunities. Coping methods employed by South Korean police included: escape, formal action, ally-formation, and reliance on co-workers. In
contrast, U.S. police were far more likely to directly report incidents on paper and avoid social networking solutions (Morash, Jeong, et al., 2006).

Haarr and Morash (1999) noted that stress levels were higher in officers who had a tendency to express their anger, coped through escape, and/or did not use formal methods of action. Unfortunately, in their study, Haarr and Morash (1999) failed to control for stressors. As a result, it is difficult to know whether the stressors or the coping strategies were responsible for the stress.

In conclusion, the differences between Western and Eastern cultures are best understood in the context of individualism, collectivism, and Confucian ideology. Also, the differences become more apparent in the stages of the strain process. There is great variance in emotion and coping that has not been studied as thoroughly in Eastern cultures. While cultural literature suggests Asian society to be a meeker and more timid civilization, reports of anger and coping have been reported in many publications. The present study intends to focus on both anger and depression, as well as an array of coping strategies, to better understand the South Korean police and also hopefully unearth new findings of the emotionality and coping behaviors of Asian society in the new century.
CHAPTER 5
RESEARCH QUESTIONS

Despite the large number of prior studies, there is still more research needed on GST. Chapter 5 will explain how to fill these gaps.

Current Study and Hypotheses

This study proposes that Agnew’s GST can explain the prevalence of police misconduct. According to the GST, if individuals experience a failure to achieve positive goals, removal of positive stimuli, or presentation of negative stimuli, they are more likely to commit police misconduct. Next, this study will examine the mediating effects of negative emotions, such as anger and depression, on the relationships between officers’ strain and police misconduct. Further, this study assumes that police officers experience considerable strain and feel negative emotions, resulting in use of maladaptive coping strategies, such as harboring a lower level of social support and self-efficacy or partaking in differential association. Coping strategies such as these, along with others, play a moderating role as a bridge between the main strains and police misconduct.

Based on GST, a hypothesized model is presented in Figure 1. It is hypothesized from prior research that officers’ strain has a positive relationship with misconduct and that officers’ strain is positively related to negative emotions (anger and depression). Furthermore, it is hypothesized that negative emotions (anger and depression) have positive relationships with misconduct and mediate the relationship between strain and misconduct. Finally, it is hypothesized that the conditioning variables of social support and self-efficacy weaken the relationship between strain and misconduct and differential association strengthens the relationship between strain and misconduct.
It is vital that the relationship between strain and police misconduct be understood. This section specifies several research questions and hypotheses that will help determine this relationship.

The main research questions are as follows:

**H1. Do Strains from GST Predict Misconduct in Korean Police Officers?**

**Hypothesis 1a. “Failure to achieve positive goals” strains have a significant positive effect on police misconduct.** Following Merton’s (1938) original theory, Agnew (1992) expanded on the importance of failure to achieve positive goals strains and their relationships with delinquency. He stressed that disjunction between expectation and actual achievement is a high predictor of strain.

Hypothesis 1a is supported by prior research studying the positive relationship between failure to achieve positive goals strains with delinquency (Baron & Hartnagel, 2002; Robbers, 2004) and with school related deviance (De Coster & Kort-Butler, 2006). Ostrowsky and Messner (2005) also supported Agnew’s claim when they found that
failure to achieve positive goals affected both property crime and violent crime in individuals. Many South Korean officers work in isolation, separated from supervisors and citizens (Sherman, 1982; Westley, 1956). This can cause some officers to feel that there is a significant gap between their expectation of a respectful police career and the reality of their jobs. In addition, an individual’s perception of the likelihood of achieving a goal is important for determining strain. The more confident an officer feels about achieving a goal, the more strain s/he suffers if the goal is not achieved.

Agnew argued from his research that justness and fairness play a major role in determining high-crime and low-crime communities (Agnew, 1999). Agnew (1992) further contended that perceptions of inequity and unjustness can lead to delinquency. Authors have supported Agnew’s theory and found that an unfair grade, viewed as an unjust strain, increased incidences of fighting and shoplifting in adolescents (Mazerolle et al., 2003; Mazerolle & Piquero 1998).

**Hypothesis 1b. “Removal of positive stimuli” strains have a significant positive effect on police misconduct.** Drawing on aggression and stress literature, Agnew (1992) claimed that the removal of positive stimuli can be more harmful than the failure to achieve positive goals. South Korean officers lose many positive stimuli, such as quality time with family and friends, due to the need to prioritize official duties and a strong commitment to work. This devotion is expected and usually enforced by bureaucratic orders from supervisors or other work responsibilities. Akers and Sellers (2009) support this by suggesting that the loss of a potential reward, exemplified in the loss of a family member or friend, or expulsion from school, can cause greater strain and the desire to replace the loss. In examining Hypothesis 1b with a sample of college
students, authors found that the removal of positive stimuli led to shoplifting (Mazerolle & Piquero 1998; Mazerolle et al., 2003). De Coster & Kort-Butler (2006) and, similarly, Robbers (2004) reported that loss of friends, break-ups, and being ignored, were positively related to delinquency.

**Hypothesis 1c. “Presentation of negative stimuli” strains have a significant positive effect on police misconduct.** GST has shown that there is a significant relationship between actual or anticipated presentation of negative stimuli and delinquency (Agnew, 1992; Agnew & White, 1992). Agnew (1992) suggested that negative stimuli, such as child abuse, victimization, physical punishment, poor parental or peer relationships, negative school experiences, and/or verbal threats/abuse are linked to delinquency. Further data has shown that the presentation of negative stimuli may lead to aggression (Bandura, 1973; Kaplan et al., 1983; Linsky & Straus, 1986; Novy & Donohue, 1984; Zillmann, 1979). A positive relationship has been found between negative life events and negative relationships with adults (Brezina, 1999; Hoffman & Cerbone, 1999; Paternoster & Mazerrolle 1994). South Korean officers are continuously exposed to many noxious stimuli, such as dangerous or psychologically difficult situations, which can lead to harmful chronic stress. Also hostile organizational environments have been shown to have a strong influence on police misconduct (Klockars et al., 2004; Sherman, 1978).

**H2. Do Strains from GST Cause Negative Emotions in South Korean Officers?**

**Hypothesis 2a. “Failure to achieve positive goals” strains have a significant positive effect on anger.** The major focus of strain theory has been on anger and its relationship with strain and delinquency. Agnew (1992) explained that the distinction between expectations and actual achievements lead to anger, resentment and rage. It
is therefore justified to predict that failure to achieve positive goals will have a positive effect on anger. To support this, Tittle et al. (2008) found that goal blockage strains had a significant positive relationship with anger and depression.

Agnew (1992, 2001) referenced literature reporting on justice and claimed that perceptions of unjustness mainly produce anger. Anger increases an individual’s outward reaction and increases an individual’s desire for revenge (Hoffman & Spence, 2010). People experiencing anger usually attribute malicious intent to the acts of others (Agnew, 2006).

**Hypothesis 2b. “Failure to achieve positive goals” strains have a significant positive effect on depression.** In addition to anger, Agnew (1992) suggested that the failure to achieve positive goals based on one’s expectations may cause negative emotions such as depression, disappointment and dissatisfaction. Ford and Schroeder (2008) reported that academic strain from unmet goals is significantly associated with depression. Sharp et al. (2005) reported that goal blockage strains in males and females had a positive relationship with negative emotional response, which was measured by depression, crying and shunning of personal interactions. In an earlier study, Sharp et al. (2001) reported that goal blockage had a positive relationship with depression.

**Hypothesis 2c. “Removal of positive stimuli” strains have a significant positive effect on anger.** Agnew (1985, 1989) reported that removal of positive stimuli, resulting in situations such as poor school and family environments, significantly affects anger. Ganem (2010) found that strain, brought about by the loss of a romantic interest, leads to anger and a greater likelihood of striking another person. Kaufman (2009) also
supported Agnew’s theory by reporting that the loss of loved ones to suicide has a significant relationship with having a bad temper in females. Walls et al. (2007) reported that caretaker rejection in adolescence is also positively associated with anger.

**Hypothesis 2d. “Removal of positive stimuli” strains have a significant positive effect on depression.** Agnew (1992) describes depression as an inner-directed emotion. Therefore, it is understandable that personal loss would be closely related to depression and other inner-directed emotions. Kaufman (2009) reported that loss of loved ones to suicide has a significant relationship with depressive symptoms in males and females. Walls et al. (2007) found that depressive symptoms are positively associated with reporting caretaker rejection, or the loss of affection and attention, in adolescents.

**Hypothesis 2e. “Presentation of negative stimuli” strains have a significant positive effect on anger.** Agnew (1985) suggested in his GST that certain individuals who could not elude unpleasant circumstances were more probable to engage in delinquency and escape the negative strain through anger. Brezina (1996) supported this theory by reporting that school strains, measured by parental punitiveness, mean teachers, and dissatisfaction with school, were a significant predictor of anger, anxiety, resentment, and depression and that delinquency lessened the effect of strain on these negative emotions. Sharp et al. (2005) reported that parental hostility in both males and females, as well as negative life events had a significant positive relationship with anger. Bao et al. (2004) reported that negative stimuli, measured by bad relations with teachers, parents, and peers, were positively related to anger. Given the noxious
environment of police work, it is predicted that this study will find similar results and show a significant relationship between negative stimuli and anger in officers.

**Hypothesis 2f. “Presentation of negative stimuli” strains have a significant positive effect on depression.** Unlike anger, inner-directed emotions, such as depression, leave an individual feeling powerless in the face of an overwhelming situation (Agnew, 2006). Therefore, exposure to negative stimuli can increase an individual’s depressive state. Ford and Schroeder’s (2008) study found that students undergoing academic strain suffered from high levels of depression. Bao et al. (2004) further supported Agnew’s claim and reported that negative stimuli, measured by bad relations with teachers, parents, and peers, were positively related to depression. Jang (2007) reported that strain from unavoidable variables such as household work and health issues has a positive relationship with depression and anxiety.

**H3. Do Negative Emotions Cause Misconduct and Mediate the Relationship between Strains and Misconduct in South Korean Officers?**

**Hypothesis 3a. Anger has a significant positive effect on police misconduct.** Agnew (2006) argues that anger leads to the belief that delinquency is justified because the activity is committed to fixing a “perceived wrong.” Many officers tend to believe their misconduct is justifiable (Caldero & Crank, 2004; Meese & Ortmeier, 2003). According to one of the most complete tests of GST, anger was the best predictor of deviance (Baron, 2004). Studies have shown that individuals who experience high levels of anger are more likely to partake in deviance (Agnew, 1993, 2001; Bao et al., 2004; Capowich et al., 2001; Ganem, 2010; Hay, 2003; Jang & Johnson, 2003; Simons et al., 2003) and have an increased desire for revenge (Hoffman & Spence, 2010). Aggressive police officers are also more likely to receive
citizen complaints (Brandl et al., 2001; Worden, 1989). Jang & Rhodes (2012) reported that trait anger has a positive relationship with violent crime.

**Hypothesis 3b. Anger mediates the positive relationships between “failure to achieve positive goals” strains and police misconduct.** Given Agnew’s theory on strain, anger, and deviance, stated above, it is predicted that anger will mediate misconduct in officers experiencing goal-blockage strains. Sharp et al. (2005) supported Agnew’s theory and found that anger mediated the relationship between unmet goals and eating disorders.

**Hypothesis 3c. Anger mediates the positive relationships between “removal of positive stimuli” strains and police misconduct.** Given Agnew’s theory on strain, anger, and deviance, stated above, it is predicted that anger will mediate misconduct in officers experiencing removal of positive stimuli strains. Hollist et al. (2009) found that anger mediated the relationship between strains, measured by absence of parental support, parental withdrawal of love, and delinquency. Walls et al. (2007) also supported this theory and found that anger mediated the relationship between caretaker rejection and suicide in American Indian youths.

**Hypothesis 3d. Anger mediates the positive relationships between “presentation of negative stimuli” strains and police misconduct.** Based on Agnew’s theory, it is predicted that anger will mediate misconduct in officers experiencing presentation of negative stimuli strains. Sharp et al. (2005) reported that anger mediated the relationship between negative strains, such as parental hostility and delinquency in females. Piquero and Sealock (2004) similarly reported that anger mediates the relationship between presentation of negative stimuli strains and
delinquency in males. Jang and Rhodes (2012) reported that trait anger mediated the relationship with strain, measured by child maltreatment and violent crime.

**Hypothesis 3e. Depression has a significant positive effect on police misconduct.** While anger appears to be the emotion most directly related to crime, depression is also linked to delinquency. As stated in Hypothesis 2b, depression is likely to increase the chances that an individual will attempt to cope with negative emotions with deviance, such as drug or alcohol use (Agnew, 1992, 2006). Prior research supports this theory and is consistent with this study’s prediction that depression has a positive effect on police misconduct. Bao et al. (2004) stated that depression leads to school crime, while Hoffmann and Su (1998) found that depression led to substance abuse. Depression was also linked to suicide (Walls et al., 2007). Aseltine et al. (2000) reported that negative emotionality had a positive relationship with delinquency. Jang and Rhodes (2012) reported a positive relationship between state depression and drug use and property crime. Sharp et al. (2001) found that trait depression was positively related to purging.

**Hypothesis 3f. Depression mediates the positive relationships between “failure to achieve positive goals” strains and police misconduct.** GST predicts that depression will mediate misconduct in officers experiencing goal-blockage strains. Ford and Schroeder (2008) supported this prediction by reporting in their study that individuals experiencing depression from academic stress were at an increased risk of partaking in non-medical use of prescription stimulants. Sharp et al. (2005) found that negative emotional response, measured by depression, mediated the relationship between unmet goals and eating disorders. Sharp et al. (2001) found that the
relationship between failure to achieve desired goals and purging was mediated by depression.

**Hypothesis 3g. Depression mediates the positive relationships between “removal of positive stimuli” strains and police misconduct.** Given Agnew’s theory on strain, depression, and deviance, it is predicted that depression will mediate misconduct in officers experiencing removal of positive stimuli strains. Prior research supports this theory and is consistent with this study’s prediction that depression mediates the relationship between removal of positive stimuli strains and police misconduct. Hollist et al. (2009) found that depression mediated the relationship between strains, measured by parental withdrawal of love and absence of parental support, and delinquency. Kaufman (2009) similarly reported that depressive thoughts mediated the strain of losing a loved one to suicide and weekly alcohol consumption. Sharp et al. (2001) found that the relationship between negative life events, measured by loss, and purging was mediated by depression. Walls et al. (2007) reported that caretaker rejection increased the likelihood of suicide by 9 times.

**Hypothesis 3h. Depression mediates the positive relationships between “presentation of negative stimuli” strains and police misconduct.** Based on GST, it is predicted that depression will mediate misconduct in officers experiencing presentation of negative stimuli strains. In a sample of law enforcement officers, on-the-job strain and alcohol abuse were found to be mediated by depression and anxiety (Swatt et al., 2007). Piquero and Sealock (2004) reported that depression mediated the relationship between presentation of negative stimuli strains and delinquency in males.
Swatt et al. (2007) found that the relationship between alcohol abuse and work-related strain was mediated by depression.

**H4. Do Conditioning Variables Moderate the Relationship between Strains and Police Misconduct?**

- **Hypothesis 4a.** Social support weakens the positive relationship between “failure to achieve positive goals” strains and police misconduct.
- **Hypothesis 4b.** Social support weakens the positive relationship between “removal of positive stimuli” strains and police misconduct.
- **Hypothesis 4c.** Social support weakens the positive relationship between “presentation of negative stimuli” strains and police misconduct.

When experiencing strain, criminal coping is more likely when the individual cannot turn to others, such as family, friends, coworkers, and professionals, for social support (Agnew & Brezina, 2010). Agnew further contended that individuals who have many conventional support resources are less likely to react to objective and subjective strain with deviance. In South Korea, social support conditions the relationship between strains and misconduct, even if officers culturally tend not to depend on coworkers for coping behaviors. This is because South Korean officers can defuse their stress and solve their issues with the help of coworkers or supervisors by socializing after work, typically venting to each other while enjoying an alcoholic beverage. Social support has been argued to condition the effect of different types of strain (Mazarolle & Maahs, 2000; Robbers, 2004). Arter (2007) reported that officers experiencing a negative affective state were less likely to respond with deviance if they had supportive factors available. Poor social support, such as family conflict (Aseltine et al., 2000) can lead to deviance by encouraging individuals to associate with delinquents who approve of criminal behavior (Anderson, 1999). Furthermore, Agnew (2006) suggested that lack of social support for sanctions for criminal activity allows people to cope with strains through crime.
Hypothesis 4d. Self-efficacy weakens the positive relationship between “failure to achieve positive goals” strains and police misconduct.
Hypothesis 4e. Self-efficacy weakens the positive relationship between “removal of positive stimuli” strains and police misconduct.
Hypothesis 4f. Self-efficacy weakens the positive relationship between “presentation of negative stimuli” strains and police misconduct.

Self-efficacy is a trait that affects whether an individual will engage in cognitive, emotional and behavioral coping (Agnew, 1992). Self-efficacy conditions strain by influencing an individual’s sensitivity to objective strains and how s/he subjectively interprets them. Agnew (1992) argued that those with low self-efficacy are more likely to cope with strain through deviance, whereas individuals with high self-efficacy are more likely to alleviate strains with behavioral coping that is not delinquent. Self-efficacy has shown conditioning effects on deviance in prior research (Hoffmann & Miller, 1998; Mazarolle & Maahs, 2000). In South Korea, even though individuals focus on group harmony and characteristically resort to self-blame for solving problems to some extent, this study will examine Agnew’s theory on self-efficacy as a coping strategy and will determine if officers with higher levels of self-efficacy show weaker relationships between all three tested strains and police misconduct.

Hypothesis 4g. Differential association strengthens the positive relationship between “failure to achieve positive goals” strains and police misconduct.
Hypothesis 4h. Differential association strengthens the positive relationship between “removal of positive stimuli” strains and police misconduct.
Hypothesis 4i. Differential association strengthens the positive relationship between “presentation of negative stimuli” strains and police misconduct.

Agnew (1992) argued that deviant peer groups acted to reinforce deviant behavior. Later, Agnew (2015), along with other authors (Paternoster & Mazerolle, 1994), reported that criminogenic strains force an individual to associate with other individuals who are favorable to crime and soon imitate and reinforce this crime
themselves. Agnew (2006) argued that individuals associated with criminal peers are more likely to experience strains and respond with committing crime. Differential association was found to be the strongest predictor of drug use among adolescents (Akers et al., 1979) and one of the most influential pressures in police agencies (Alpert & Dunham, 1997). It is predicted that this study will support Agnew’s theory and show that officers engaging in differential association with problematic officers will experience stronger relationships between all three tested strains and police misconduct.
CHAPTER 6
METHODOLOGY

Chapter 6 covers the research design and methodology utilized in this study. Data, measuring instruments, and the data analysis plan are explained in detail.

Data and Data Collection

Survey data collected by Dr. Moon-Gyu Hwang in January of 2015 in the Daegu Metropolitan Police Agency (DMPA) in Daegu, South Korea, were used to assess the empirical validity of GST. The subsequent sections will discuss the operational definitions and measurements of endogenous and exogenous variables used in the analysis. Finally, the analytical techniques used to assess the impact of the predictors on police misconduct will be discussed.

Data and Sampling

The present study includes a dataset gathered in DMPA conference meetings by Dr. Moon-Gyu Hwang. The unit of analysis of the study is sworn officers working in the DMPA. This set of data originally was formulated to illustrate key factors influencing police stress levels and overall job satisfaction, ultimately to reveal how police stress affects officers’ coping strategies among Korean police officers.

Convenience sampling is a common sampling method in most modern clinical research, and the cost-effectiveness and logistics have significant benefits (Hulley, Cummings, Browner, Grady, & Newman, 2013). The definition of convenience sampling implies that sample subjects be conveniently available to the researcher. Simply put, subjects are selected because they are the most available. A clear example would include subjects chosen by the researcher because they share positions within the same company. Convenience sampling is a popular method because it is faster, easier,
and less expensive than other modes of sampling. Contrarily, a criticism of convenience sampling is the idea that the sample is biased. Often volunteers are not representative of the general population. Moreover, because subjects and researchers tend to be employed by the same facilities within a convenience sample, bias can be introduced to the sample due to the values and inclinations of the company. The present study avoids such bias, however, given that the researcher (Hwang) works in a different facility (i.e., Joong-Bu University) than the participants. Furthermore, all participants have the same possibility of being selected, because the participation of the conference meeting is mandatory for officers and the researcher visited each department randomly.

**Daegu metropolitan police agency.** The DMPA is the fifth largest regional police agency in South Korea, having a total of 4,989 sworn police officers while the KNPA has a total of 103,540 sworn officers (KNPA, 2013). The DMPA is comprised of one regional agency, 10 first-graded police departments and riot police regiments. Under the 10 police departments are 512 patrol divisions and 1,436 police boxes. The headquarters of the Korean National Police Agency governs all the regional police agencies and police departments with hierarchical organizational orders and budget support.

As of December 2014, this police agency had jurisdiction over Daegu metropolitan city, which has a residential population of 2,494,264 and an area of 81,834,800 hectares (Daegu Office of Planning and Coordination, 2015). The Daegu metropolitan city, the fourth largest city in South Korean, is comprised of mostly one Korean ethnicity, all speaking the Korean language, with 25,203 foreign residents. The per capita income in Daegu is ranked the sixth highest among 16 large cities in South
Korea (Korean National Statistical Office, 2013). Economically or socially none of the city areas has been severely disadvantaged.

There were 96,186 criminal cases in 2013 in the DMPA (crime rates: 3,892 cases per 100,000), which accounted for 5.2 percent of the total criminal cases of South Korea. The national average crime rate is 3,698 cases per 100,000. Serious crimes such as murder, robbery, sex crime, theft, and physical assault in the DMPA account for 4.8 percent to 6.1 percent, of the national total, similar percentages to those of other regional police agencies. The clearance rates of the serious criminal cases in the DMPA are 78 percent, which is not much different from those of other regional agencies (National average: 76 percent) (KNPA, 2013).

The DMPA was chosen because it is the fifth largest urban area agency among 16 regional police agencies. Its geographical environment and policing workloads rank as average compared with other regional agencies in South Korea. Also, officers working in the DMPA are transferred regularly to a different police department in the same regional agency or move to other regional police agencies by law or at their own will. All the laws and rules administrating South Korean officers are uniform. Any and all characteristics and problems in the DMPA are likely to be similar to those of other regional agencies. The policing workload of the officers in the DMPA is similar to that of officers’ workloads in other agencies (KNPA, 2013). Rules and regulations are standardized across all departments, meaning all officers are punished and rewarded for the same actions.

All sworn officers working in the DMPA must participate in a monthly conference meeting in each police department or regional police agency where they work. Absence
without a justifying cause (e.g., sick leave, serious family emergencies, or a business trip) leads to disciplinary action. At these meetings, the police chief addresses matters of importance, such as changing rules and regulations, urgent work priorities, and job education lectures. The meetings are generally 1.5 hour long. Because attendance is mandatory, the conference meeting is an ideal environment to collect data.

The samples can be considered representative because the South Korean police force is a highly centralized national agency with identical training systems and rules, and all officers can be assigned to different departments or regional agencies regularly or at their will. Moreover, by focusing on officers in one metropolitan city, this study may exhibit fewer precinct variations in department-level characteristics (e.g., disciplinary rules), crime rates, and policing environments (e.g., citizen complaints) which may affect the sample elements and officers’ stress. In sum, each police department in the DMPA is likely to share common traits and experiences, as their environments are similar.

Data Collection Procedure

The survey used in this study contained 120 questions on topics ranging from demographics to police stress and strains commonly experienced by police officers. Commonly, the questions utilized closed-ended questions regulating responses to a tight network of possibilities. This type of questionnaire improves the standardization due to the same frame of reference for all participants (Singleton, & Straits, 2009). These types of questions are perfect for this study because officers’ motivations are uncertain (Hagan, 2006). Each of the responses utilizes “Likert-scaling,” allowing the researcher to further measure each individual’s mood and stance. Professor Moon-Gyu Hwang (Joong-Bu Univ.), who teaches police administration in Korea and is fluent in English and Korean, formulated all survey questionnaires based on those used by US
scholars and translated from English into Korean. After completing the Korean questionnaire, Hwang compared the questionnaire with the English versions in regards to cultural and semantic nuances of a Korean speaker. Finally, another Korean professor, Jeong-Lim Kim (Briar Cliff Univ.), who lectures on criminology and criminal justice in the US and is fluent in English and Korean, retranslated the Korean questionnaire into English and compared those papers with the original English versions. This procedure ensured that the survey questionnaire covered the same police concepts and experiences as those of US officers.

Professor Moon-Gyu Hwang conducted the survey on the condition of anonymity of the responses. With permission from the DMPA’s police chiefs, the professor visited 2 to 3 conference meetings every week from January 5th to January 30th in 2015. At the end of each conference meeting, the professor explained the purpose of the survey and informed the officers that participants could withdraw at any time. The professor also explained that the survey did not ask personal information, such as name and officer registration number. Officers who understood the survey’s purpose and wanted to participate in the research stayed in the conference room and responded to the survey questionnaires, which required about 20 minutes.

There was the possibility that the participants would think their police chief wanted them to participate in the survey to reflect positively on him or her. Also, officers having experience with internal investigations may have been less likely to participate in the survey for fear of revealing their experiences. The professor attempted to mitigate this risk by emphasizing that all participation was completely voluntary.
There was a potential risk that an officer could be identified as guilty of misconduct. It might be possible to re-identify a participant committing misconduct through a completed survey questionnaire. However, because the questionnaire was anonymous and confidential, this was highly unlikely. Identity was not known to researchers or anyone else and the results were recorded only in aggregate. Furthermore, all participants were instructed that there was no financial benefit in return for their participation. After giving instructions about adequate spacing between participants, and discouraging officers from looking at others' responses, the professor distributed the questionnaires to the participating officers, who were asked to put the finished questionnaire in the envelope, seal it, and put it in a box in the conference office. Table 6-1 presents the number of participants in each police department for this survey.

Table 6-1. Number of Sworn Officers in Each Department and Participants of Survey

<table>
<thead>
<tr>
<th>Location</th>
<th>N of Sworn Officers</th>
<th>N of Distributed Questionnaires</th>
<th>N of Responses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMPA1</td>
<td>444</td>
<td>64</td>
<td>58 (13.1)</td>
</tr>
<tr>
<td>DMPA2</td>
<td>367</td>
<td>47</td>
<td>45 (12.3)</td>
</tr>
<tr>
<td>DMPA3</td>
<td>581</td>
<td>59</td>
<td>57 (9.8)</td>
</tr>
<tr>
<td>DMPA4</td>
<td>429</td>
<td>50</td>
<td>49 (11.4)</td>
</tr>
<tr>
<td>DMPA5</td>
<td>374</td>
<td>68</td>
<td>67 (17.9)</td>
</tr>
<tr>
<td>DMPA6</td>
<td>407</td>
<td>59</td>
<td>56 (13.8)</td>
</tr>
<tr>
<td>DMPA7</td>
<td>597</td>
<td>60</td>
<td>56 (9.4)</td>
</tr>
<tr>
<td>DMPA8</td>
<td>390</td>
<td>49</td>
<td>48 (12.3)</td>
</tr>
<tr>
<td>DMPA9</td>
<td>475</td>
<td>68</td>
<td>61 (12.8)</td>
</tr>
<tr>
<td>DMPA10</td>
<td>321</td>
<td>63</td>
<td>56 (17.4)</td>
</tr>
<tr>
<td>DMPA11</td>
<td>334</td>
<td>69</td>
<td>68 (20.4)</td>
</tr>
<tr>
<td>Total</td>
<td>4,719</td>
<td>656</td>
<td>621</td>
</tr>
</tbody>
</table>

Note. Response rates: 621/4,719=13.16 percent

Overall, the professor disseminated 656 surveys for the officers who agreed to participate and received 621 responses, corresponding to 13.2 percent of the sworn
officers. After conducting listwise deletion method of 22 subjects with missing data, the final number of valid cases was reduced to 599 (12.7%).

**Descriptive Statistics**

For this dissertation, descriptive characteristics of the sample, such as gender, age, working experience, rank, education, and marriage were examined. Table 6-2 provides the number and percentage of the participants according to the demographic variables and the number of experiences of internal investigation.

In terms of age distribution, the majority of officers (48.4 percent) were in their 40s, with 33.6 percent in their 30s, and only 6.8 percent in their 20s. As for working experience, 30.0 percent of officers had worked over 20 years and 23.9 percent had worked 10-14 years. Officers having 15-19 years of experience made up 20.2 percent of the sample and 14.5 percent of officers had 5-9 years of experience. Officers with under 4 years of experience accounted for just 11.4 percent. In terms of rank, most of the officers were assistant inspector (30.7 percent) and inspector (38.1 percent), while officer and senior police officer accounted for 8 percent and 11 percent, respectively. The percentage of senior inspector and higher rank was 12.2 percent. This rank is considered as a supervisory position in the DMPA. The senior inspector officer is assigned as a captain of the patrol division. Regarding officers of inspector rank, their work depends on their positions. Some of them supervise their patrol team comprised of 5-10 officers, while some officers of inspector rank work as line officers.

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1 The sampling frame of this study excluded 272 sworn officers working in a riot squad and a SWAT team of the DMPA, because they do not contact citizens or provide direct police services. The main roles of these officers are managing demonstrations, providing security services for an important event, and suppressing terrorism of hostage situations.
Most of the officers had an Associate’s degree (20.7 percent) or a Bachelor’s degree (56.8 percent), with 19.2 percent having only a high school diploma. In terms of marriage, the majority of officers (85.8 percent) were married.

Table 6-2. Demographic Characteristics of the Sample (N=599)

<table>
<thead>
<tr>
<th>Variable &amp; Metrics</th>
<th>N (%)</th>
<th>N of Internal Investigation (Row %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=Male</td>
<td>537(89.6)</td>
<td>326(61)</td>
</tr>
<tr>
<td>1=Female</td>
<td>62(10.4)</td>
<td>44(71)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=20-29</td>
<td>41(6.8)</td>
<td>27(66)</td>
</tr>
<tr>
<td>1=30-39</td>
<td>201(33.6)</td>
<td>140(70)</td>
</tr>
<tr>
<td>2=40-49</td>
<td>290(48.4)</td>
<td>164(57)</td>
</tr>
<tr>
<td>3=50 or more</td>
<td>67(11.2)</td>
<td>39(59)</td>
</tr>
<tr>
<td>Working Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=less than 4 years</td>
<td>68(11.4)</td>
<td>49(72)</td>
</tr>
<tr>
<td>1=5--9 years</td>
<td>87(14.5)</td>
<td>59(68)</td>
</tr>
<tr>
<td>2=10--14 years</td>
<td>143(23.9)</td>
<td>92(64)</td>
</tr>
<tr>
<td>3=15--19 years</td>
<td>121(20.2)</td>
<td>68(56)</td>
</tr>
<tr>
<td>4=over 20 years</td>
<td>180(30.0)</td>
<td>102(57)</td>
</tr>
<tr>
<td>Rank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=Officer</td>
<td>48(8.0)</td>
<td>38(79)</td>
</tr>
<tr>
<td>1=Senior Police Officer</td>
<td>66(11.0)</td>
<td>47(71)</td>
</tr>
<tr>
<td>2=Assistant Inspector</td>
<td>184(30.7)</td>
<td>119(65)</td>
</tr>
<tr>
<td>3=Inspector</td>
<td>228(38.1)</td>
<td>128(56)</td>
</tr>
<tr>
<td>4=Senior Inspector or higher</td>
<td>73(12.2)</td>
<td>38(52)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=High school</td>
<td>115 (19.2)</td>
<td>75(65)</td>
</tr>
<tr>
<td>1=Associate</td>
<td>124 (20.7)</td>
<td>72(58)</td>
</tr>
<tr>
<td>2=Bachelor</td>
<td>340 (56.8)</td>
<td>215(63)</td>
</tr>
<tr>
<td>3=Master or higher</td>
<td>20 (3.3)</td>
<td>8(40)</td>
</tr>
<tr>
<td>Marriage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=Unmarried</td>
<td>85 (14.2)</td>
<td>63(74)</td>
</tr>
<tr>
<td>1=Married</td>
<td>514 (85.8)</td>
<td>307(60)</td>
</tr>
</tbody>
</table>

For reference, Table 6-3 compares the sample statistics with population parameters in the DMPA and the KNPA. The distributions of gender and age in the sample and the populations of the DMPA and KNPA are as follows: The numbers of female officers in the sample, the DMPA, and the KNPA were 10.4 percent, 9.9 percent,
and 7.8 percent, respectively. Officers who were in their 20s in the sample, the DMPA and the KNPA populations were 6.8 percent, 6.3 percent, and 5.6 percent, respectively, while officers in their 40s comprised the largest group in the sample and the DMPA and KNPA populations (48.4 percent, 42.0 percent, and 42.3 percent, respectively). Officers in their 30s were in the second largest group with 33.6 percent in the sample and 26.7 percent in the population in the KNPA, while they were the third largest category in the DMPA population, with 25.3 percent. In the DMPA, officers in their 50s were the second largest category (26.4 percent) in the DMPA.

Working experience demonstrated that the officers having worked over 20 years comprised the largest group: 30.0 percent in the sample, and 45.7 percent and 43.1 percent in the DMPA and the KNPA populations, respectively. The percentages of officers having worked 10-14 years and 15-19 years in the sample were 23.9 percent and 20.2 percent, while percentage of officers in the population of the DMPA were 13.6 percent and 18.6 percent respectively. In the KNPA population, officers having worked 10-14 years and 15-19 years accounted for 14.6 percent and 15.2 percent, respectively. Officers having worked less than 4 years accounted for the smallest percentages, 11.4 percent in the sample, and 8.4 percent and 13.3 percent in the DMPA and KNPA populations.

In terms of rank, while inspector rank accounted for the largest category with 38.1 percent in the sample, and 46.8 percent and 40.0 percent in the populations of the DMPA and the KNPA, assistant inspector rank was the second largest category, with 30.7 percent in the sample, and 27.9 percent and 29.5 percent in the DMPA and KNPA populations, respectively. Officer rank accounted for the smallest percentage, with 8.0
percent in the sample, and 6.4 percent and 10 percent in the DMPA and KNPA populations. Senior police officer rank and senior inspector or higher rank accounted for 11.0 percent and 12.2 percent in the sample, compared to 9.4 percent and 9.6 percent in the population of the DMPA, and 12.5 percent and 8.0 percent in the population of the KNPA.

Table 6-3. Comparison of Sample Statistic and Population Parameter of DMPA and KNPA

<table>
<thead>
<tr>
<th>Variable &amp; Metrics</th>
<th>N (%) of Sample(599)</th>
<th>N (%) of DMPA Population (4,936 in August 2015)</th>
<th>N (%) of KNPA Population (103,540 in 2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=Male</td>
<td>537(89.6)</td>
<td>4,449(90.1)</td>
<td>95,447(92.2)</td>
</tr>
<tr>
<td>1=Female</td>
<td>62(10.4)</td>
<td>487(9.9)</td>
<td>8,093(7.8)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=20-29</td>
<td>41(6.8)</td>
<td>313(6.3)</td>
<td>5,755(5.6)</td>
</tr>
<tr>
<td>1=30-39</td>
<td>201(33.6)</td>
<td>1,251(25.3)</td>
<td>27,596(26.7)</td>
</tr>
<tr>
<td>2=40-49</td>
<td>290(48.4)</td>
<td>2,067(42.0)</td>
<td>43,844(42.3)</td>
</tr>
<tr>
<td>3=50 or more</td>
<td>67(11.2)</td>
<td>1,305(26.4)</td>
<td>26,345(25.4)</td>
</tr>
<tr>
<td>Working Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=less than 4 years</td>
<td>68(11.4)</td>
<td>414(8.4)</td>
<td>13,799(13.3)</td>
</tr>
<tr>
<td>1=5 – 9 years</td>
<td>87(14.5)</td>
<td>679(13.7)</td>
<td>14,319(13.8)</td>
</tr>
<tr>
<td>2=10 – 14 years</td>
<td>143(23.9)</td>
<td>670(13.6)</td>
<td>15,123(14.6)</td>
</tr>
<tr>
<td>3=15 – 19 years</td>
<td>121(20.2)</td>
<td>918(18.6)</td>
<td>15,648(15.2)</td>
</tr>
<tr>
<td>4=over 20 years</td>
<td>180(30.0)</td>
<td>2,255(45.7)</td>
<td>44,651(43.1)</td>
</tr>
<tr>
<td>Rank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=Officer</td>
<td>48(8.0)</td>
<td>314(6.3)</td>
<td>10,390(10.0)</td>
</tr>
<tr>
<td>1=Senior Police Officer</td>
<td>66(11.0)</td>
<td>462(9.4)</td>
<td>12,980(12.5)</td>
</tr>
<tr>
<td>2=Assistant Inspector</td>
<td>184(30.7)</td>
<td>1,376(27.9)</td>
<td>30,529(29.5)</td>
</tr>
<tr>
<td>3=Inspector</td>
<td>228(38.1)</td>
<td>2,312(46.8)</td>
<td>41,385(40.0)</td>
</tr>
<tr>
<td>4=Senior Inspector or</td>
<td>73(12.2)</td>
<td>472(9.6)</td>
<td>8,256(8.0)</td>
</tr>
<tr>
<td>higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0=High school</td>
<td>115(19.2)</td>
<td>1,164(23.6)</td>
<td></td>
</tr>
<tr>
<td>1=Associate</td>
<td>124(20.7)</td>
<td>951(19.3)</td>
<td></td>
</tr>
<tr>
<td>2=Bachelor</td>
<td>340(56.8)</td>
<td>2,701(54.7)</td>
<td></td>
</tr>
<tr>
<td>3=Master or more</td>
<td>20(3.3)</td>
<td>120(2.4)</td>
<td></td>
</tr>
</tbody>
</table>

Note. The number of the sample and DMPA population excluded 272 and 267 officers working in the riot squad and SWAT team respectively. The statistics of education of the KNPA was not collected.
Although the ratio of the population in DMPA with a high school diploma (23.6 percent) was a little higher than that of the sample (19.2 percent), the percentage of officers with an Associate’s degree was similar to that of the population in the DMPA (20.7 percent and 19.3 percent, respectively). Most of the officers had a Bachelor’s degree (56.8 percent in the sample and 54.7 percent in the population of the DMPA).

Even though there is not much difference between the sample and the DMPA and KNPA population, it should be noted that the distribution of higher-ranked and experienced officers in these data could possibly bias the inference of the data analysis toward the higher-ranked and experienced officers.

**Measurement and Variables**

This analysis used eight latent variables measured with multiple indicators and three observed variables. The dependent variable was police misconduct. The major independent variables were officers’ strains (failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli), negative emotions (anger and depression), conditioning variables (social support, self-efficacy, and differential association), and other demographic predictors (working experience, rank, and education).

The GST explicitly proposes causal order between strains, negative emotions, and misconduct. However, it is important to realize that the cross-sectional data described above may not actually ensure the causal links between the GST’s main variables as the variables may be covaried. The surveys in this study were completed in January, 2015. The strains and misconduct issues were considered for the previous 5-year period. And participants were asked about negative emotions experienced over only the previous two months. Also conditioning variables were independent of time.
period. Therefore, the strains and misconduct experiences may involve mutual causalities: stress as cause of misconduct and vice versa. Also the measurements for negative emotional traits could be causes of strains, and misconduct itself could be a strain related to negative emotions. Thus, there may be a causal order problem in these data.

**Police Misconduct: Experiencing Internal Investigation**

This study used the misconduct item of Wolf and Piquero's 2011 research. The following question was asked: “How many times have you been a defendant in a formal or informal internal investigation over the past five years?” Hickman (2007) demonstrated that the self-report survey method is a valid measure for misconduct after comparing the official citizen complaint data with the self-reported complaint data. He found that 10 percent of official complaints were underreported and 9 percent of official complaints were non-reported, suggesting that there was a high level of correspondence between self-reporting complaints and official data.

The official types of misconduct in the KNPA are bribery, mistreatment of work, neglect of duty, injury to dignity, and violation of minor rules. However, this self-report survey can include more diverse problematic officers' behaviors that are not officially accepted by the AID, for example, verbal abuse, minor use of force and discourtesy toward citizens.

Citizen complaints are not the major source of officers’ discipline (Kutnjak Ivkovic & Kang, 2012). The AID also detects officers’ misconduct through unexpected, or regular, audits and inspections (KNPA, 2013). These audits are not internal investigations, but they may give reason to later initiate internal investigations.
However, there are a few concerns in terms of the initiation of an internal investigation. First, the AID may conduct unexpected audits and inspections of specific departments that have a recent history of serious misconduct. Second, the internal investigations may be initiated not only from detection of an officer’s misconduct, but also from his/her supervisor’s response to observed misconduct of his/her subordinate officers. Restated, an officer can be investigated based on his/her supervisor’s observation of the suspicious behaviors of the officer under the influence of severe strains. One should be cautious when interpreting the data, because the unexpected initiation of an internal investigation by the AID or a supervisor against an officer may raise the frequency of misconduct in that department.

Despite these observations in possible measurement flaw, the discrepancies between departments regarding harsh or lenient internal investigations may not cause serious measurement errors because most of the misconduct cases are controlled under the same standards set by the headquarters of the DMPA. The beginning of a formal or informal internal investigation indicates that there is a probable cause of misconduct. This measurement is beneficial in that it can identify potential deviant officers, because prior experiences are shown to be significant predictors of future misconduct (Greene et al., 2004; Harris, 2008; Kane & White, 2009).

In terms of how many times an officer experienced an internal investigation, the results indicate the following: 370 (61.8 percent) reported no experience, 136 (22.7 percent) reported one experience, 69 (11.5 percent) reported two experiences, 16 (2.7 percent) reported three experiences, 5 (.8 percent) reported four experiences, and 3 (0.5 percent) reported five experiences or more (Table 6-3). Because of the thin tails in
higher values in distributions the cases of two to five times or more were combined into a value of 'two and over.' Finally, three categories of police misconduct were used: no experience (61.8 percent), once (22.7 percent), and two times and more (15.5 percent). The skewness and kurtosis of the composite variable are .99 and -.52, respectively. The dependent variable was treated as the ordinal categorical variable in this study, considering the statistical distribution and the nature of concept. Higher scores indicate a higher frequency of police misconduct.

Table 6-4. Description of Measures and Descriptive Statistics on Police Misconduct (N=599)

<table>
<thead>
<tr>
<th>Measures</th>
<th>0 (61.8%)</th>
<th>1 (22.7%)</th>
<th>2 (11.5%)</th>
<th>3 (2.7%)</th>
<th>4 (0.8%)</th>
<th>5+ (0.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times have you been a defendant in a formal or informal internal investigation over the past five years?</td>
<td>Mean</td>
<td>SD</td>
<td>Skew</td>
<td>Kurtosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.60</td>
<td>0.91</td>
<td>1.76</td>
<td>3.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Strains

To measure the strains officers were experiencing, this study followed the basic strains suggested by Agnew (1992), who argued that failure to achieve positive goals strains are felt in the gap between expectations and actual achievements (goal blockage), and the gap between fair (just) outcomes and actual outcomes (unfair outcomes). The survey asked officers to reflect on the success and fairness of their goal outcomes over the past 5 years in three areas: academic/career goals, social/family life goals, and health/appearance goals. Officers were asked: “How successful have you been at reaching your goals in each of the above-listed dimensions (academic/career goals, social/family life goals, and health/appearance goals) over the past five years?” The officers’ response options were: 0=very successful, 1=successful, 2=somewhat
successful, 3= not at all successful (Cronbach’s alpha=0.76). Then, “How fair have outcomes concerning your goals in each of the above-listed dimensions (academic/career goals, social/family life goals, and health/appearance goals) been over the past five years?” The officers’ response options were: 0=very fair, 1=fair, 2=somewhat fair, 3=not at all fair (Cronbach’s alpha=0.84). Higher scores represent higher strains. The goal blockage and unfair outcomes questions measured officers’ perception of failure to achieve their goals, in a way that reflected the GST’s assumption that strains originate from individuals’ perceptions of goal blockage and unfairness from a socio-psychological perspective. The five-year time span was necessary for officers to reflect on their experiences and determine what recurring stressful events they face.

To calculate the latent variable, the responses for both items (goal blockage and unfair outcomes) were added together in each dimension (academic/career goals, social/family life goals, and health/appearance goals) to generate three composite items for the failure to achieve positive goals latent variable (Cronbach’s alpha=0.82).

Next, for measuring removal of positive stimuli and presentation of negative stimuli strains, the items from the original list of stressful life events in the survey data were divided using factor analysis. Factor analysis confirmed that the nine items represented two factors which were labeled “removal of positive stimuli” (four items) and “presentation of negative stimuli” (five items) over eigenvalues 1 and over a 0.5 factor loading threshold. Removal of positive stimuli construct included break up of an intimate relationship, a disagreement/argument with a close friend, loss of a close friend or intimate partner due to move by the friend/partner or self move (Cronbach’s alpha=0.80). Presentation of negative stimuli construct included an unplanned
pregnancy (both for the woman and the responsible male), a car accident, being a victim of a crime, physical harassment or abuse, and discrimination on the basis of gender, religion, or sexual orientation (Cronbach’s alpha=0.81). The officers reported how often they have experienced each of the life events on the list over the past five years. The answers were 0=never, 1=once, 2=two times, 3=three times, 4=four times, and 5=five or more times. The questions and responses are summarized in Table 6-5.

Table 6-5. Description of Measures and Descriptive Statistics on Strains (N=599)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Metrics</th>
<th>N. of Internal Investigation</th>
<th>0</th>
<th>1+</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to Achieve Positive Goals (5yr)</td>
<td>Range:0~6, Interval: 0=very successful, 3=not at all successful</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Academic/Career Goals</td>
<td>3.91</td>
<td>1.41</td>
<td>3.95</td>
<td>1.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Social/Family Life Goals</td>
<td>3.69</td>
<td>1.35</td>
<td>3.74</td>
<td>1.47</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Health/Appearance Goals</td>
<td>4.16</td>
<td>1.34</td>
<td>4.07</td>
<td>1.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach Alpha=0.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Removal of Positive Stimuli (5yr)</td>
<td>Range:0~5, Ratio: 0=none, 5=five or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Breaking up with an intimate partner</td>
<td>0.49</td>
<td>0.98</td>
<td>0.50</td>
<td>1.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Getting into a disagreement/argument with a close friend</td>
<td>0.55</td>
<td>0.98</td>
<td>0.62</td>
<td>1.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Having a close friend or intimate partner move away</td>
<td>0.45</td>
<td>0.90</td>
<td>0.60</td>
<td>1.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Moving away from a close friend or intimate partner move away</td>
<td>0.32</td>
<td>0.66</td>
<td>0.48</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach Alpha=0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation of Negative Stimuli (5yr)</td>
<td>Range:0~5, Ratio: 0=none, 5=five or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Having or being responsible for an unplanned pregnancy</td>
<td>0.12</td>
<td>0.42</td>
<td>0.16</td>
<td>0.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Getting in a car accident</td>
<td>0.48</td>
<td>0.82</td>
<td>0.59</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Being a victim of a crime</td>
<td>0.14</td>
<td>0.52</td>
<td>0.23</td>
<td>0.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Being physically harassed or abused</td>
<td>0.11</td>
<td>0.63</td>
<td>0.15</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Being discriminated against on the basis of your sex, religion, or sexual orientation</td>
<td>0.08</td>
<td>0.44</td>
<td>0.15</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbach Alpha=0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Negative Emotions**

The two dimensions of negative emotions were formulated from the study of Piquero and Sealock (2000). Agnew (1992) argued that anger and depression are types of negative emotions that strain may produce. The first dimension, anger, was measured by three items: (1) “How often in the past two months have you felt irritable, like exploding?” (2) “How often in the past two months have you had arguments at home?” (3) “How often in the past two months have you lost your temper over little things?” This measurement is similar to those used in other GST studies (Brezina, 1996; Mazerolle & Piquero, 1997, 1998). The response categories were labeled as follows: 0=never, 1=seldom, 2=sometimes, 3=often, and 4=almost always (Cronbach’s alpha=0.82).

The second dimension, depression, was measured by a nine-item depression scale similar to measurements in other GST studies (Brezina, 1996). Officers were asked how often in the past two months they had experienced loss of appetite, crying spells, stomach pains, headaches, nausea and vomiting, or felt unable to keep going, unfocused, worthless, or fearful. Response options were: 0=never, 1=seldom, 2=sometimes, 3=often, and 4=almost always (Cronbach’s alpha=0.91).

The anger and depression measurements in this study are originally treated as emotional traits, which means an individual’s tendency, or natural disposition, to have a specific emotional experience (Agnew, 2002). However, emotional traits instigate emotional states reacting to stressors. For example, GST scholars claim that individuals with high emotional traits are more likely to respond to stressful situations with emotional states (Mazerolle et al., 2003; Mazerolle & Piquero, 1997). The questions and responses are presented in Table 6-6.
Table 6-6. Description of Measures and Descriptive Statistics on Negative Emotions (N=599)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Metrics</th>
<th>N. of Internal Investigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Anger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often in the past two months have you...</td>
<td>Range:0~4,</td>
<td></td>
</tr>
<tr>
<td>1. Felt irritable, like exploding</td>
<td>Likert</td>
<td>1.24</td>
</tr>
<tr>
<td>2. Had arguments at home</td>
<td></td>
<td>1.13</td>
</tr>
<tr>
<td>3. Lost your temper over little things</td>
<td>4=almost always</td>
<td>1.29</td>
</tr>
<tr>
<td>Cronbach Alpha=0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often in the past two months have you...</td>
<td>Range:0~4,</td>
<td></td>
</tr>
<tr>
<td>1. Lost your appetite</td>
<td>Likert</td>
<td>1.03</td>
</tr>
<tr>
<td>2. Had crying spells</td>
<td></td>
<td>0.50</td>
</tr>
<tr>
<td>3. Had stomach pains</td>
<td></td>
<td>0.82</td>
</tr>
<tr>
<td>4. Had headaches</td>
<td></td>
<td>1.04</td>
</tr>
<tr>
<td>5. Had nausea, vomiting</td>
<td></td>
<td>0.62</td>
</tr>
<tr>
<td>6. Felt unable to keep going</td>
<td></td>
<td>0.90</td>
</tr>
<tr>
<td>7. Spent time daydreaming</td>
<td></td>
<td>0.98</td>
</tr>
<tr>
<td>8. Felt worthless</td>
<td></td>
<td>0.86</td>
</tr>
<tr>
<td>9. Had numerous fears</td>
<td></td>
<td>0.88</td>
</tr>
<tr>
<td>Cronbach Alpha=0.91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interestingly, while Agnew (2005) emphasized that strains lead to negative emotional states, he argued that chronic or repeated strains lead to negative emotional traits, which cause delinquent behaviors (Agnew 2006). Emotional traits have been used as consequences of strain for delinquency in many studies (Agnew & White, 1992; Aseltine et al., 2000; Brezina, 1996; Broidy, 2001; Mazerolle & Piquero, 1997, 1998; Piquero & Sealock, 2000), even though emotional state is more influential in GST.

In terms of anger, many scholars highlighted that trait anger increases aggressive behavior (Berkowitz, 1993; Barbour, Eckhardt, Davison, & Kassinove, 1998; Bettencourt, Talley, Benjamin, & Valentine, 2006; Deffenbacher, 1992; Deffenbacher,
Lynch, Oetting, & Yingling, 2001). Individuals having high trait anger are known to be more prone to state anger (Mazerolle & Piquero, 1998; Wilkowski & Robinson, 2008).

This study assumed that officers’ strains would cause misconduct through negative emotional states (products of emotional traits) generated from their strains. Therefore, emotional traits may be a surrogate for emotional states in a GST study (Mazerolle et al., 2003).

**Conditioning Variables**

Agnew (2013) suggested several coping strategies. This project utilized the items which have been proven to be valid and reliable from prior research. Social support, self-efficacy, and differential association were included as coping strategies that may influence the relationship between negative stimuli and police misconduct.

**Social support**

First, a seven-item social support scale was formulated from the study of Johnson and Morris (2008). Officers were asked their perceptions of how much: (1) friends cared about them; (2) their family understood them; (3) their family had fun together; (4) their family paid attention to them; (5) coworkers cared about them; (6) supervisors cared about them; (7) parents cared about them. Response options were: 0=not at all, 1=very little, 2=somewhat, 3=quite a bit, and 4=very much (Cronbach’s alpha=0.86). The questions and responses are presented in Table 6-7.
<table>
<thead>
<tr>
<th>Measures</th>
<th>Metrics</th>
<th>N. of Internal Investigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>How much do you feel that…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Coworkers care about you?</td>
<td>Range:</td>
<td>2.09</td>
</tr>
<tr>
<td>2. Supervisors care about you?</td>
<td>0~4,</td>
<td>1.90</td>
</tr>
<tr>
<td>3. Your parents care about you?</td>
<td>Likert</td>
<td>2.99</td>
</tr>
<tr>
<td>4. Your friends care about you?</td>
<td>0=not</td>
<td>2.28</td>
</tr>
<tr>
<td>5. People in your family understand you?</td>
<td>at all</td>
<td>2.52</td>
</tr>
<tr>
<td>6. You and your family have fun together?</td>
<td>4=very</td>
<td>2.19</td>
</tr>
<tr>
<td>7. Your family pays attention to you?</td>
<td>much</td>
<td>2.64</td>
</tr>
</tbody>
</table>

Cronbach Alpha=0.86

**Self-efficacy**

An eight-item self-efficacy scale by Chen, Bollen, Paxton, Curran, & Kirby (2001) was used for this project. Self-efficacy, a social-cognitive indicator formulated by Bandura (1977, 1995), indicates an individual's ability to have control over his/her thoughts and feelings and actions. This is a key factor in perceiving, evaluating, and regulating outward environment and a self-system (Pajares, 1996). It can also be referred to as self-capability to handle lifetime stressors. In this study, the officers were asked their levels of agreement with the statements: (1) I will be able to achieve most of the goals that I have set for myself. (2) When facing difficult tasks, I am certain that I will accomplish them. (3) In general, I think that I can obtain outcomes that are important to me. (4) I believe I can succeed at most any endeavor to which I set my mind. (5) I will be able to successfully overcome many challenges. (6) I am confident that I can perform effectively on many different tasks. (7) Compared to other people, I can do most tasks very well. (8) Even when things are tough, I can perform quite well. The response categories were: 0=strongly disagree, 1=disagree, 2=neither agree nor disagree,
3=agree, and 4= strongly agree (Cronbach’s alpha=0.93). The results are summarized in Table 6-8.

Table 6-8. Description of Measures and Descriptive Statistics on Self-Efficacy (N=599)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Metrics</th>
<th>N. of Internal Investigation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1. I will be able to achieve most of the goals that I have set for myself.</td>
<td></td>
<td></td>
<td>2.35</td>
<td>.82</td>
</tr>
<tr>
<td>2. When facing difficult tasks, I am certain that I will accomplish them.</td>
<td></td>
<td></td>
<td>2.34</td>
<td>.84</td>
</tr>
<tr>
<td>3. In general, I think that I can obtain outcome that are important to me.</td>
<td></td>
<td></td>
<td>2.62</td>
<td>.76</td>
</tr>
<tr>
<td>4. I believe I can succeed at most any endeavor to which I set my mind.</td>
<td></td>
<td></td>
<td>2.68</td>
<td>.79</td>
</tr>
<tr>
<td>5. I will be able to successfully overcome many challenges.</td>
<td></td>
<td></td>
<td>2.88</td>
<td>.72</td>
</tr>
<tr>
<td>6. I am confident that I can perform effectively on many different tasks.</td>
<td></td>
<td></td>
<td>2.72</td>
<td>.77</td>
</tr>
<tr>
<td>7. Compared to other people, I can do most tasks very well.</td>
<td></td>
<td></td>
<td>2.69</td>
<td>.72</td>
</tr>
<tr>
<td>8. Even when things are tough, I can perform quite well.</td>
<td></td>
<td></td>
<td>2.65</td>
<td>.74</td>
</tr>
</tbody>
</table>

Cronbach Alpha=0.93

**Differential association**

The differential association variable in this project was formulated by Dr. Ronald Akers. A three-item differential association scale measuring general misconduct, civilian complaints, and neglect of duty was used. In a practical sense, general misconduct in this measurement includes bribery and mistreatment of work, while neglect of duty misconduct includes neglect of duty, injury to dignity, and violation of minor rules listed in Table 4-1, as well as the official types of South Korean police misconduct. Civilian complaints cover most of police misconduct claimed by citizens. Generally, these three categories (general misconduct, civilian complaints, and neglect of duty) of police misconduct account for most of the misconduct cases in South Korean (KNPA, 2013).
In this study, officers were asked: (1) How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for general misconduct (to the best of your knowledge)? (2) How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for civilian complaints (to the best of your knowledge)? (3) How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for neglect of duty (to the best of your knowledge)? The response categories were: 0=none, 1=1-2, 2=3-4, 3=5-6, and 4=over 7 (Cronbach’s alpha=0.66). The questions and responses are presented in Table 6-9.

The differential association variable in this study includes all the officers whom the participants identify as best or close friends. Based on the argument by Akers (2009) that close delinquent officers relay a favorable opinion of misconduct, the absolute number of close delinquent officers is an important factor for determining an officer’s exposure to delinquent friends.

Differential association is particularly important when analyzing the misconduct variable. First, misconduct incidences are not confidential in South Korea. In serious misconduct cases, the details are frequently broadcast in the news media. Culturally, under the influence of collectivism and Confucianism, South Korean officers concern themselves with the interdependent relationships between coworkers. Most incidences of misconduct are reported to the DMPA headquarters and important cases are shared officially among officers for the purpose of preventing similar cases. Even minor misconduct is easily shared with general officers because it is culturally acceptable to
cherish informal social relationships and share important information between close coworkers. Second, it is unlikely for there to be discrepancies in the frequency of internal investigations between departments due to the identical standards of the DMPA and a yearly transferal of the department chief.

However, it should be noted that there may be some possibility that an unexpected audit and inspection by the AID and the initiation of an internal investigation for preventative measures can cause potential measurement errors. This would generate some biases when measuring differential association.

Table 6-9. Description of Measures and Descriptive Statistics on Differential Association (N=599)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Metrics</th>
<th>N. of Internal Investigation</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many among your coworkers you consider to be among your best or closest friends having been a defendant under internal investigation for general misconduct do you have (to the best of your knowledge)?</td>
<td></td>
<td></td>
<td>0.76</td>
<td>0.66</td>
<td>1.05</td>
</tr>
<tr>
<td>2. How many among your coworkers you consider to be among your best or closest friends having been a defendant under internal investigation for civilian complaints do you have (to the best of your knowledge)?</td>
<td>Range: 0~4, Likert 0=none 4=over 7</td>
<td>1.09</td>
<td>0.83</td>
<td>1.35</td>
<td>0.81</td>
</tr>
<tr>
<td>3. How many of your coworkers that you consider to be among your best or closest friends have been a defendant under internal investigation for neglect of duty (to the best of your knowledge)?</td>
<td>Cronbach Alpha=0.66</td>
<td>0.53</td>
<td>0.65</td>
<td>0.79</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Control Variables

In addition to the endogenous and exogenous variables, relevant demographic variables were selected to avoid skewing relationships between GST variables and
police misconduct. Scholars argued that people of lower socioeconomic status, the elderly, the poor, women, and the unmarried, experience stronger psychological distress than advantaged people when facing the same stress (Kessler & Cleary, 1980; Pearlin & Johnson, 1977). As explained in the police misconduct research section, demographic variables such as working experience, rank, and education were selected in this study.

When asked for working experience in the Police Department, responses included: 0=less than 4 years, 1=5-9 years, 2=10-14 years, 3=15-19 years, and 4=over 20 years. Rank was measured by: 0=officer, 1=senior police officer, 2=assistant inspector, 3=inspector, and 4=senior inspector or higher officer. In terms of level of education, responses included: 0=high school, 1=associate, 2=bachelor, and 3=master and more.

**Bivariate Correlation**

As seen in each measurement and in all the independent and dependent variables listed above, all the constructs were composed of items used in prior studies and good internal consistency was provided. Therefore, a bivariate analysis was performed to check how well the independent exogenous variables would predict the dependent variable (police misconduct). A Pearson correlation table of all independent variables, such as strains, negative emotions, and conditioning variables, on police misconduct is presented in Table 6-10, which shows the distributions of all the summed independent variables and control variables based on the response categories of the dependent variable.
Table 6-10. Bivariate Correlations with Independent Variables and Police Misconduct (N=599)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of experiences of a defendant under the formal or informal II (N=599, Mean=.60, SD=.91)</th>
<th>Coeff.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean of Sum(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean of Sum(SD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean of Sum(SD)</td>
<td></td>
</tr>
<tr>
<td>Strains</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FG</td>
<td>11.76(3.51) 11.62(3.67) 11.97(3.69)</td>
<td>0.012</td>
</tr>
<tr>
<td>RP</td>
<td>1.81(2.71) 1.65(2.78) 2.99(3.79)</td>
<td>0.114**</td>
</tr>
<tr>
<td>PN</td>
<td>.93(2.16) 1.05(2.12) 1.63(3.00)</td>
<td>0.100*</td>
</tr>
<tr>
<td>Negative Emotions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANG</td>
<td>3.65(2.20) 4.15(2.37) 4.48(1.88)</td>
<td>0.146***</td>
</tr>
<tr>
<td>DEP</td>
<td>7.65(5.74) 8.30(5.55) 10.68(6.17)</td>
<td>0.173***</td>
</tr>
<tr>
<td>Conditioning Variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td>16.62(4.80) 16.21(4.85) 15.69(4.26)</td>
<td>-0.072+</td>
</tr>
<tr>
<td>SEFF</td>
<td>20.94(5.05) 21.25(4.58) 18.89(4.89)</td>
<td>-0.116**</td>
</tr>
<tr>
<td>DA</td>
<td>2.37(1.56) 2.86(1.71) 3.68(2.23)</td>
<td>0.262***</td>
</tr>
<tr>
<td>Demo.</td>
<td>N (%)</td>
<td></td>
</tr>
<tr>
<td>Fem.</td>
<td>0=537(89.6) 1=62(10.4)</td>
<td>0.12</td>
</tr>
<tr>
<td>Age</td>
<td>0=41(6.8) 1=201(33.6) 2=290(48.4) 3=67(11.2)</td>
<td>1.58</td>
</tr>
<tr>
<td>Work.</td>
<td>0=68(11.4) 1=87(14.5) 2=143(23.9) 3=121(20.2) 4=180(30.0)</td>
<td>2.31</td>
</tr>
<tr>
<td>Rank</td>
<td>0=48(8.0) 1=66(11.0) 2=184(30.7) 3=228(38.1) 4=73(12.2)</td>
<td>2.22</td>
</tr>
<tr>
<td>Edu.</td>
<td>0=115(19.2) 1=124(20.7) 2=340(56.8) 3=20(3.3)</td>
<td>1.42</td>
</tr>
<tr>
<td>Marr.</td>
<td>0=85(14.2) 1=514 (85.8)</td>
<td>0.83</td>
</tr>
</tbody>
</table>

Note. FG=Failure to Achieve Positive Goals, RP=Removal of Positive Stimuli, PN=Presentation of Negative Stimuli, ANG=Anger, DEP=Depression, SS=Social Support, SEFF=Self-Efficacy, DA=Differential Association. +p<0.1, *p<0.05, **p<0.01, ***p<0.001.
There are significant correlations between police misconduct and latent variables such as removal of positive stimuli ($r=0.114$, $p<0.01$), presentation of negative stimuli ($r=0.100$, $p<0.01$), anger ($r=0.146$, $p<0.001$), depression ($r=0.173$, $p<0.001$), self-efficacy ($r=-0.116$, $p<0.01$) and differential association ($r=0.262$, $p<0.001$). Failure to achieve positive goals and social support did not show any significant relationships with police misconduct. Therefore, mediating or moderating relationships between those strains and police misconduct through negative emotions or conditioning variables should be tested. Among the conditioning variables, social support presented lower levels of significance of $p<0.1$.

From the demographic variables, female ($r=-0.090$, $p<0.05$), age ($r=0.125$, $p<0.01$), working experience ($r=0.130$, $p<0.01$), rank ($r=0.157$, $p<0.001$), and marital status ($r=0.094$, $p<0.05$) were identified as having a significant correlation with police misconduct, while education did not show any significant relationship. This study exclude female and age variables because there were small percentage of female officers (10.4 percent) and age was highly correlated with working experience.

**Statistical Analysis**

The measurements and basic relationships among the variables with the collected data have been examined. Multiple equations are needed for the latent variables hypothesized based on the GST. Therefore, this study used structural equation modeling (SEM) to examine the effects of strains on police misconduct, as well as the mediating effects of negative emotions, such as anger and depression, and the moderating effects of conditioning variables, such as social support, self-efficacy, and differential association. SPSS (Statistical Package for the Social Sciences) v19 and AMOS (Analysis of Moment Structures) v18 software was utilized for the application of
Bayesian SEM analysis and inference was based on Monte Carlo Markov Chain (MCMC). The Bayesian estimation was used because the endogenous dependent variable in this study (police misconduct) is ordinal categorical data and the Bayesian estimation has many benefits when compared to traditional maximum likelihood estimation (Byrne, 2013; Hoyle, 2012). When compared to the Bayesian approach, other approaches (e.g., maximum likelihood) lack flexibility and strong estimation and analysis for SEM structures (Lee, 2007; Palomo, Dunson, & Bollen, 2011).

The Bayesian model incorporates the prior distribution with the likelihood function to generate a posterior probability distribution. Therefore, it uses more information than frequentist inference (maximum likelihood). Because Bayesian inference can manipulate a suitable prior distribution, it can overcome model identification issues. Therefore, the Bayesian approach allows for nonlinear models, models with non-normal data, models with mixed continuous, binary or ordered categorical variables, and models with missing data. Given the broad applicability of Bayesian approach, Bayesian SEM has been deemed the most suitable approach in this research (Congdon, 2003; Scheines, Hoijtink, & Boomsma, 1999).

**Structural Equation Modeling**

SEM is a statistical approach, which tests hypotheses to determine the associations among latent and observed variables (Hoyle, 1995). Latent variables are also referred to as unobserved variables or factors, while observed variables are sometimes called indicator of manifest variables. Given that latent variables cannot be

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2 In a frequentist perspective, probability is a limiting frequency, meaning that frequentist inference is assigning probability to a repetitive event where uncertainty is caused by randomness. It assumes that the population value is a fixed and unknown quantity, and calculates significance tests of hypotheses and confidence intervals for the quantity (Bland & Altman, 1998).
directly measured, scholars should define the latent variables and have them represented in terms of observed variables. The relationships between latent variables are categorized as direct effects, indirect (mediated) effects, or covariances (Weston & Gore, 2006). The relationships among measured and latent variables are direct effects. According to Baron and Kenny (1986), an indirect effect is the relationship between an independent latent variable and a dependent latent variable that is mediated by one or more variables. Lastly, covariances are similar to correlations because they are defined as non-directional relationships among independent latent variables. In addition to being a statistical approach, SEM is also a methodology that examines a theory with a confirmatory approach, such as hypothesis-testing.

After comparing SEM to other multivariate techniques, Byrne (2013) listed four distinctive features of SEM. First, SEM specifies the relationships between variables through the analysis of covariances in a specified model and assesses whether the data fit the specified model. It takes a confirmatory approach to data analysis. Second, error variance parameters are explicitly estimated through SEM. The latent variables created in SEM can represent the single construct more precisely because SEM can separate measurement error from true variance. SEM explains all observed variables and error terms at the same time (Gau, 2010). Third, both observed and unobserved (latent) variables are incorporated in SEM procedures. SEM allows scholars to distinguish with both observed and unobserved variables in a model to test the diverse hypothesized model efficiently (Kline, 2005). Other multivariate techniques refer to only observed measurements. Utilizing multiple observed variables to estimate the unobserved variable’s effect, SEM can check the reliability of the measured observed variables and
improve the estimation of the observed variables’ effects on criteria. Fourth, estimation of direct and indirect effects of variables under study and modeling multivariate relations is possible with SEM. Multiple dependent variables and conditioning or mediating variables like those in this study can be accommodated in SEM. SEM facilitates direct and indirect relationships if necessary and helps researchers analyze their models from a global viewpoint (Gau, 2010).

This study will test the mediation model with anger and depression as mediators for the relationships between strains and misconduct. Also, the moderating model will be built with strains, an interaction term, and a conditioning variable (e.g., social support, self-efficacy, and differential association).

SEM has advantages over traditional regression due to factor loadings, regression coefficients, and fit indices (Gau, 2010). SEM can also handle complex relationships that are tested to check if a theoretical model matches the data (Bowen & Guo, 2011). Therefore, SEM is an ideal theoretical model for this study. What makes SEM a powerful analysis approach is that all multifaceted and detailed relationships are specified theoretically first and then tested to see if they are, in fact, represented in the sample data.

SEM is composed of two primary models: the measurement model and the structural model. The measurement model analyzes how observed variables relate to latent variables, while the structural model examines the latent variables’ directional relationships in the established measurement model (Bowen & Guo, 2011).

**General Steps in SEM**

As a linear statistical approach, SEM tests hypotheses about relationships between observed variables and latent variables (Hoyle, 1995). Latent variables cannot
be directly measured; therefore, observed variables must be assigned to latent variables so that they can be measured.

There are several steps in SEM when researchers want to build, evaluate, and modify their model. While SEM is known for its adjustability, the use of SEM follows a four-step process: specification, estimation, evaluation of fit, and interpretation and reporting. Those four steps are always included. A fifth step, re-specification, is added with great frequency to SEM usage (Hoyle, 2012).

The first step, specification, creates a model, or a formal issuance of the way in which the observable data become known. A model supporting the hypotheses that resulted from the study of the observable data is built. Also, specification defines variables and their relationships with one another, as well as the parameters in the model. Concerning the designation of variables, the choice is which variables to include. Latent variables, on the other hand, may not be included at all. If a latent variable is chosen, it is modeled. After these decisions are made, researchers must then determine which variables are related. If the variables are deemed to be related, they then must be classified as directional or non-directional. The last portion of the specification step is determining whether the parameters in a model are fixed or free (Hoyle, 2012).

A particularly important element of specification is identification, which is called ‘model identification’ when there is sufficient observed information to make all the estimates requested in a model (Kline, 2005). To discern if a model is under-identified, just-identified, or over-identified, the difference of known and unknown information should be examined. This process includes determining the number of degrees of freedom (the number of known elements minus the number of parameters) in a model.
(Hoyle, 2012). For a model to be classified as “identified,” every free parameter needs to have a distinctive estimate.

An issue arises in SEM concerning the statistical power of tests of model fit. While a researcher’s hypotheses may be best supported by a model, this can be difficult to determine due to many factors, such as degrees of freedom, parameter correlation, and sample size, which vary among fit indices or statistical tests (Hoyle, 2012). There is no consensus regarding the sample size. As a rule of thumb, structural equation modeling for a sample size greater than 200 is understood to offer sufficient statistical power (Garver & Mentzer, 1999; Hoelter, 1983; Kline, 2005; Weston & Gore, 2006).

The purpose of the second step, estimation, is to minimize discrepancies between observed and estimated/implied covariance matrices (Hoyle, 2012). This study adopted a Bayesian estimation due to its flexibility and strength for estimating parameters, including nonlinear data, missing data, and ordinal categorical data (Lee, 2007; Palomo et al., 2011).

The third step, evaluation of fit, addresses the question of whether the specified model should be rejected, or if the data are acceptably represented. The evaluation is generally initially carried out with the $\chi^2$ test; however, the value for $\chi^2$ is typically a poor approximation, and therefore cannot be used for a formal statistical test. The evaluation of fit is a critically important phase. Because of this, statistics and fit indices are continually updated. In addition to the Chi-Square test, this study employed the Root Mean Square Error of Approximation (RMSEA) with the 90 percent confidence interval (CI), the Standardized Root Mean Square Residual (SRMR), by the guide of Kline (2005), and the Comparative Fit Index (CFI).
Following the evaluation of fit, a researcher is faced with a fork in the road. The options are as follows: interpretation and reporting, or respecification. Concerning the latter, respecification entails revisiting specification, then estimation, and finally evaluation of fit (Hoyle, 2012).

Interpretation and reporting, on the other hand, occurs when respecification is bypassed, or has already been performed, and the evaluation of fit supports the model. In this phase the main issues addressed are: "the basis for the model, the meaning of particular parameters in the model, and the degree to which the model is unique in accounting for the observed data" (Hoyle, 2012). Finally, there has been a shift regarding cross-sectional design and the interpretation of correlational data. According to Pearl (2000), properly justified parameters can be considered tests of causal effects. This is a departure from more conservative interpretations of directional effects (Hoyle, 2012).

SEM’s general lack of attention to interaction terms could be a result of the intricacies of specifying interactions with latent variables. A simple case for analyzing interaction effects occurs when there is a categorical variable with several categories (e.g., gender) in the interaction. This multiple-group SEM is not recommended when the small number of groups is formed from continuous variables because SEM neglects the grouped variable’s measurement error (Marsh, Wen, Nagengast, & Hau, 2012). This study used a standardized solution technique to produce interaction terms, which made the model significantly simple (Marsh et al., 2012).

Bayesian Estimation

This study applied a Bayesian approach to SEM because the dependent variable (police misconduct) is an ordinal categorical variable. Most SEM programs are
statistically developed under the assumption that the data are continuous measurements with a multivariate normal distribution. Bayesian approach has the ability to test binary and categorical data having non-normal distributions (Lee, & Tang, 2006).

Maximum likelihood (ML) is the standard estimation method for SEM method of estimation. The ML estimator is predicated on a sample with a multivariate normal distribution and produces results that are asymptotically valid. ML estimation of small samples tends to cause non-convergence, biased model fit indices, and negative variance estimates (Chen et al., 2001). The ML estimation posits that the true values of model parameters are fixed but unknown, and it views the parameter estimations of a given sample as random but known.

On the other hand, Bayesian statistical methods do not rely on asymptotic properties of inferential estimations (Baldwin & Fellingham, 2013; Lee & Song, 2004; Muthen & Asparouhov, 2012). The Bayesian approach views all true model parameters as unknown, which by default makes them random, and they are assigned a joint probability distribution (Byrne, 2013). This distribution allows researchers to review what they currently know about the parameters. To put more plainly, a Bayesian foundation states that all unobserved quantities are to be treated as random variables, due to the assumption that they possess distributional qualities, and all observed variables are to be treated as fixed and subject to conditioning. Therefore, all statements are made in probabilistic terms, given that researchers have ceased to treat the underlying parameter values as fixed and unmoving.

There are several advantages of the Bayesian approach over ML estimation. First, Bayesian credible intervals are not restricted to a fixed form, because the intervals
are established on the percentiles of the posterior distribution, while ML estimation assumes asymptotically normal parameter estimation in its confidence intervals.

Second, the Bayesian approach can solve the issues generated from instances when the ML estimation cannot solve complex model estimations because statistical computing tools in Bayesian estimation can efficiently handle the difficulties created by the complex model. Third, the Bayesian approach allows for more accurate estimates to be obtained by incorporating the parameter’s prior distributions (Hoyle, 2012).

Schoot et al. (2004) declared there are three ingredients underlying Bayesian statistics. The first ingredient is the prior distribution or a captured image of all available knowledge before analyzing the data. The Bayesian inference process begins when statistical and empirical sources assign prior information to the unknown quantities. These prior distributions have great range, with some being based on previous field research with explicit and informative descriptions, and others that are purposefully vague and uncertain and exhibit high levels of ignorance. Researchers might have to use ‘non-informative’ or ‘diffuse’ (i.e., no information supplied with data) prior distributions when there is no prior information about the parameters available (Lee, 2007; Song & Lee, 2012).

After seeing the prior distribution, the second ingredient is the likelihood function of the data given the parameters, or more simply put, the observed evidence in the data themselves.

The third ingredient is called posterior inference, which is the combination of the first two ingredients. Bayes’ Theorem is then used to combine the evidence from the

---

3 Bayes’ Theorem provides a method to compute conditional probabilities. It states that a conditional probability for event B given event A is equal to the conditional probability of event A given event B,
observed data with the prior distribution. This combination provides a posterior
distribution, which is simply an updated distribution for the parameters (Bolstad, 2013).
The posterior distribution is produced by multiplying the prior distribution by the
likelihood function. A Markov Chain Monte Carlo (MCMC) sampling algorithm is used to
generate a chain that converges on the posterior distribution (Carlin & Louis, 2009;
Gelman, Carlin, Stern, Rubin, 2004). MCMC sampling procedure works for all sample
sizes and many types of non-normality, because MCMC samples are collected from the
posterior distribution (Scheines et al., 1999). By the MCMC process, prior distribution is
identified and posterior values for each parameter are estimated with many repetitions.
The purpose of MCMC techniques is to obtain empirical summaries of quantities of
interest from chain values by setting up and running an iterative chain of consecutive
values.

Thousands of distinct samples are replicated to estimate the Bayesian likelihood
of any given parameter. First, AMOS allows the MCMC procedure to converge to the
true joint posterior distribution by drawing burn-in 4 samples. After drawing and
discarding these samples, AMOS gives an example of what this joint posterior
distribution looks like by creating additional samples (Arbuckle, 2012).

\[
Pr(B \mid A) = Pr(A \mid B) Pr(B) / Pr(A).
\]

Substituting “parameters” for B and “data” for A, Pr(B \mid A) is referred to as
the posterior probability of parameters given the data. Pr(B) is the prior probability of parameters before
considering the data. Pr(A \mid B) is a likelihood function for the data given the parameters, and Pr(A) is the
unconditional probability of the data.

4 A number of early iterations (called the burn-in) are needed because the initial values are chosen
somewhat arbitrarily. After discarding the initial sample, the sample converges to a desired posterior
distribution (Hoikink, 2009). AMOS generates and discards 500 burn-in samples by default before
drawing the first sample for the analysis.
There are two ways to make Bayesian inferences focusing on the distribution of posterior probabilities for the parameters (see Gill, 2014). First, Bayesian inference is usually built on credible intervals, which are similar to confidence intervals of the frequentist (classical) statistics (i.e., testing null hypothesis) and developed from posterior percentiles (Gelman et al., 2004; Gill, 2014). The credible interval gives probability statement about the parameter itself. The Bayesian 95 percent credible interval, meaning that the probability of the parameter lying in the interval is 95 percent, is formed by the interval from the 2.5 percentile to the 97.5 percentiles. The means of the posterior distribution are normally the Bayesian point estimates.

Assessment of an entire model is a second way to make Bayesian inferences and is referred to as posterior predictive checking (Gelman et al., 2014; Gill, 2014; Muthen & Asparouhov, 2012). In this process, the goodness of fit of the posited model for fitting a data set is assessed by the posterior predictive p-values (PP p-values) (Meng, 1994; Rubin, 1984). A PP p-value near 0.5 indicates that a model is consistent with the actual data. Values close to 0 or 1 indicate that a model is inconsistent with actual data (Congdon, 2007). The deviance information criterion (DIC) is another index for comparing models, and rewards models that find a balance between parsimony and fit (Gill, 2014). Smaller DIC values indicate better models, and models can be compared using DIC regardless of whether they are nested or not. However, AMOS does not produce DIC when using an ordinal categorical variable (Arbuckle, 2012).

**Analysis Procedure**

The measurements of variables and bivariate correlations showed that most of the latent variables and control variables have significant relationships with police misconduct. To build the best model of the data, exploratory factor analysis (EFA) is
used to explore the number and loadings of each latent variable of this study and confirmatory factor analysis (CFA) is used to confirm the hypothesized model concerning the relationships among variables. Two-step modeling procedures (i.e., measurement model and structural model) are used to ensure that the structure of latent variables do not cause model misfitting in testing the structural model (Kline, 2005). To confirm that all of the variables are working within the same fundamental construct, factor analysis is carried out for all multiple measures of the same domain and evaluated simultaneously.

This process is divided into a number of steps. First, an EFA is conducted for each model in SPSS and a full CFA in Amos to confirm the reflective measurement model. EFA and CFA are both approaches for factor analysis, but they serve different purposes. EFA aims to answer the beginning questions about a measure’s factor structure and item performance. It is used early in the scale development process to investigate the nature of the dimensions of the latent variables. It is considered as a data reduction procedure making the model more parsimonious. This procedure includes placing or removing variables from the model (Bowen & Guo, 2011; Thompson, 2004). EFA is not identified as an unrestricted measurement model. Upon developing a hypothesis, CFA is employed to test the stated hypothesis concerning the nature of the dimensions of a latent variable as well as testing how well items measure hypothesized dimensions of latent variables. The measurement model in CFA is a multivariate regression model considering the relationships among latent variables and observed variables. CFA is a restricted measurement model that must be identified.
In the second step, latent variable scores of CFA are used to impute factor scores in Amos. This step, which is a unique strength of AMOS (Enders, 2010), creates one composite score per factor by reducing the full latent model. Just as in the latent model, the new composite score account for the factor weights of the latent variables. Testing the structural model is made much simpler given that there is only one variable per factor. Studies that have small sample sizes, complex model structures, and interaction terms benefit by using this technique. Finally, testing the structural model in AMOS concludes the process.

The first step in the path analysis is to examine the relationships between strains and police misconduct (Figure 6-1). The three strain variables (failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli) are expected to have direct, positive effects on misconduct. Then this model is tested with control variables such as working experience, rank, and education.

![Figure 6-1. Strains and Misconduct Model](image)

Note: FG=Failure to Achieve Positive Goals, RP=Removal of Positive Stimuli, PN=Presentation of Negative Stimuli, MIS=Police Misconduct

Second, the relationships between strains and negative emotions are examined (Figure 6-2), including the three strain variables and two negative emotions: anger and
depression. In this model, the three strain variables are used as exogenous variables and anger as an endogenous variable. The relationships between the three strain (exogenous) variables and depression (endogenous) variable are then examined. These two separate models are then examined with all three control variables. Separate models are used because of testing the GST's main propositions. The three strains are expected to positively predict each negative emotion.

Figure 6-2. Strains and Negative Emotions Model

Third, the relationships between anger and misconduct and between depression and misconduct are inspected. A second test includes all three control variables (Figure 6-3). Negative emotions are expected to show positive relationships with misconduct.

Figure 6-3. Negative Emotions and Misconduct Model
Fourth, the mediating effects of anger and depression are tested with the three strains and misconduct. A mediating effect refers to an independent variable’s influence on a dependent variable through another intervening variable (mediator) (Baron & Kenny, 1986). This model is first run without a mediator, and then with a mediator. Depending on the significance of the findings, the direct effects of strains and a mediating variable on misconduct, as well as the indirect effects of strains on misconduct through a mediating variable are examined (Figure 6-4). As in previous models, control variables are then tested.

![Mediation Model](image)

Figure 6-4. Mediation Model

Finally, the moderating effects of the conditioning variables (social support, self-efficacy, and differential association) are tested, including the computed interaction terms from strains (predictor) and conditioning (moderator) variables. Moderating effects occur when the effect of an independent variable on a dependent variable varies depending on another independent variable’s function (Little, Card, Bovaird, Preacher, & Crandall, 2007). To create interaction terms, all strain and conditioning variables are standardized to prevent potential collinearity between independent variables and interaction terms. Then the standardized variables are multiplied for new variables. After
checking the relationships between conditioning variables and misconduct, the moderation model is tested. In addition to three strain variables and control variables, one moderator and its interaction term included in each model (Figure 6-5).

Figure 6-5. Moderation Model
CHAPTER 7
RESULTS

Analytic Sample

Because SEM demands a data screening process, data in this study were screened for missing data, outliers, normality, linearity and homoscedasticity, and reliability and validity (Kline, 2005).

SEM also assumes that the variables are interval or ratio (Bowen & Guo, 2011). This study used the convention of most researchers and treated Likert scales as continuous variables, even though they are ordinal in nature. Bentler and Chou (1987), along with many other specialists of SEM (Beauducel & Herzberg, 2006; Byrne, 2013; DiStefano, 2002; Dolan, 1994; Hoyle, 2012), argued that if data have four or more categories, continuous methods can be used without concern, given the normally-distributed categorical variables.

Univariate

Univariate data analysis was conducted for missing data and outliers. From the 621 responses, 22 subjects (3.5 percent) were excluded due to missing data in the measurements of misconduct and demographic attributes, leading to 599 valid responses. Because all the remaining values were complete and most of the variables were measured with a 5-point or more Likert scale, except for the dependent variable, it was assumed that no extreme outliers would be found.

The normality of independent and dependent variables was examined for skewness and kurtosis. The univariate skewness and univariate kurtosis of responses measuring at less than an absolute value of 3 and 10, respectively, are considered normally distributed (Kline, 2005). After checking histograms, Q-Q plots, box plots, and
univariate skewness and kurtosis for all the variables in this study, all the variables except for the “presentation of negative stimuli” construct showed approximately normal distributions, each lying within a range of an absolute value of 2.69 in skewness and an absolute value of 8.34 in kurtosis. The four items1 (PN1, PN3, PN4, PN5) from the “presentation of negative stimuli” construct were found to be nonnormally distributed within a range of 4.33-5.82 in skewness and 22.23-36.82 in kurtosis. Therefore, all the five items in the presentation of negative stimuli construct were summed into one composite variable. Theoretically, it has been assumed that stressful events have a collective impact (Linsky & Straus, 1986). Therefore, Agnew (1992) recommends evaluating life event strains with composite scales for optimal measurement. For this reason, the presentation of negative stimuli variable was treated as a non-latent variable and excluded from the EFA and the CFA.

**Multivariate**

SEM models examine the linear relationships among variables which are represented in the variance/covariance matrix. Therefore, multicollinearity was tested by conducting regression analysis to check the independence of the independent variables. The variance inflation factor (VIF), defined as the reciprocal of the tolerance, measures how much the estimated variance of the regression coefficient is inflated by collinear independent variables (Craney & Surles, 2002; O’Brien, 2007), and a value of 10 is recommended as the highest level (Hair, Anderson, Tatham, & Black, 1995). VIF

---

1 The four items were unplanned pregnancy (PN1), victimization in a crime (PN3), physical harassment or abuse (PN4), and discrimination on the basis of gender, religion, or sexual orientation (PN5). Therefore, all the five items in the presentation of negative stimuli construct, including a car accident (PN2), were summed up into one observed variable.
and tolerance values were within a good range indicating that there were no collinearity issues among variables.

**Reliability**

The Cronbach’s Alpha was calculated to examine the responses’ reliability and all the values were over 0.60, indicating an acceptable degree of internal consistency (Nunnally & Bernstein, 1994). Low internal consistency indicates that the items are heterogeneous, suggesting that the items are not a good measure for a construct, which decreases the statistical power (Kline, 2005).

**Validity**

Regarding the validity of measuring the constructs accurately by instruments, this study used prior measurements that have been tested in comprehensive research. The construct validity is built by correlations that are associated with measurements (convergent validity) or vary independently of measurements (discriminant validity) (Westen & Rosenthal, 2003). Kline (2005) argued that the convergent validity (measuring the same construct) is established if the intercorrelations are moderate in magnitude and the discriminant validity (measuring a different construct) is built if the intercorrelations are not too high.

The results of the factor analysis using the SPSS demonstrated that the convergent validity was established due to the items’ high loadings on the predicted factors (above 0.50). The pattern matrix showed the coefficients (loadings) of the items related with each of the factors. The discriminant validity was built because few items were loaded into more than one factor in the pattern matrix. Also the discriminant validity was established by the component (factor) correlation matrix demonstrating that
there was no correlation above 0.70. The component correlation matrix indicates how intercorrelated the emergent factors were.

**Exploratory Factor Analysis**

EFA was conducted to check underlying factors and factor loadings and to facilitate SEM by examining the unidimensionality of each latent construct in the structural models: (1) strains and misconduct model, (2) strains and negative emotions model, (3) negative emotions model, (4) mediation model, and (5) moderation model. Gorsuch (1983) claimed that factor analysis helps to develop the operational constructs for theoretical constructs. Factor loadings indicate the strength of the association between the hidden factors and the variables, while factor scores are defined as a subject’s score on a factor (Kline, 1994; Rietveld & Van Hout, 1993). The general steps of EFA are as follows: (1) choice of relevant variables, (2) extraction of initial factors, (3) choice of the number of factors to retain, (4) rotation and interpretation.

After choosing relevant variables, factor extraction was utilized to determine from the larger group of variables in EFA. Principal component analysis (PCA), which explores a linear combination of variance to extract maximum variance for variables (Kline, 2005; Meyers, Gamst & Guarino, 2006; Stevens, 1996) was used to extract maximum variance for the data.

Next, the number of factors was determined by retaining factors having eigenvalues\(^2\) greater than 1 (Velicer & Jackson, 1990). Then, interpretable factors were determined through a rotation process, a procedure to achieve a set of factor loadings\(^3\)

\(^2\) Eigenvalue indicates the standardized variance to be explained by a particular factor (Tabachnick & Fidell, 2007).

\(^3\) Factor loadings above 0.4 were recommended (Floyd & Widaman, 1995).
from EFA results (McDonald, 2014). There are two types of rotations: orthogonal and oblique. This study employed the promax oblique rotation technique because the items in this data were assumed to be correlated. Rotation determines the measured variables’ locations in the factor space to clearly identify the underlying constructs. Tabachnick and Fidell (2007) suggested that oblique rotation technique is preferable when the factor loadings are over 0.33. When testing very large and dense data sets, promax rotation, a non-orthogonal (oblique) rotation method, is used because it is computationally faster. Communality is the proportion of total variance which is common among variables (Kline, 2005) and its common cut-off in social science is 0.4 (Costello & Osborne, 2005). Moreover, the factors in the component correlation matrix were not extremely high or extremely low, suggesting that oblique rotation is reasonable.

Finally, the suitability of the results for EFA was determined by evaluating the correlation matrix to identify variables with high correlation coefficients ($r>\pm 0.90$) (Yong & Pearce, 2013). Then to confirm that there were patterned relationships among variables, Bartlett’s test of sphericity was performed (significance level of $p<0.05$). Also Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was inspected (cut-off above 0.50). The KMO assesses the assumptions of factor analysis regarding a latent construct in the data, with KMO above 0.8 recognized as meritorious (Kaiser, 1974). Additionally, the percentage of the non-redundant residuals, differences between the reproduced and actual correlations, in the reproduced correlation matrix computed from the extracted factors was checked. A good fit has less than 50 percent of absolute values greater than 0.05.
Strains and Misconduct Model

Table 7-1 presents the results for the Strains and Misconduct Model. Items in two strain constructs (failure to achieve positive goals and removal of positive stimuli) were employed for EFA. With the Kaiser-Guttman retention criteria of eigenvalues greater than 1.0, two latent factors were well determined as fitting with GST (Hair et al., 1995). The two factors accounted for 67.89 percent of total variance in the seven items tested and the communalities were respectable with values above 0.40. The factor loadings of failure to achieve positive goals ranged from 0.80 to 0.89 and from 0.68 to 0.87 for removal of positive stimuli.

The coefficients in the correlation matrix showed moderate relationships among factors. KMO was acceptable at 0.73 by the Kaiser classification (Kaiser, 1974). Bartlett test indicated a high significance level (Approx. Chi-Square=1526.605, p<0.000, df=21). Also there were 9 (42 percent) non-redundant residuals with values greater than 0.05.

Table 7-1. Results of EFA for Strains and Misconduct Model (N=599)

<table>
<thead>
<tr>
<th>Constructs and Items</th>
<th>Factor Loadings</th>
<th>Communality</th>
<th>% of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to Achieve Positive Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FG1</td>
<td>0.89</td>
<td>0.79</td>
<td>37.34</td>
</tr>
<tr>
<td>FG2</td>
<td>0.89</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>FG3</td>
<td>0.80</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>Removal of Positive Stimuli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RP1</td>
<td>0.68</td>
<td>0.47</td>
<td>30.55</td>
</tr>
<tr>
<td>RP2</td>
<td>0.84</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>RP3</td>
<td>0.87</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>RP4</td>
<td>0.78</td>
<td>0.61</td>
<td></td>
</tr>
</tbody>
</table>

Strains and Negative Emotions Model, and Mediation Model

Table 7-2 presents the results for the Strains and Negative Emotions Model and the mediation model. Items in two strain constructs (failure to achieve positive goals and removal of positive stimuli) and items in two emotion constructs (anger and depression)
were used for EFA. The results showed that the four factors were extracted with

eigenvalues greater than 1.0, revealing that all items were loaded into each factor. The
four factors accounted for 65.00 percent of total variance in the 19 items tested. All

communalities demonstrated respectable values with above 0.40. The factor loadings of
the four factors ranged from 0.64 to 0.93. KMO was meritorious at 0.90 (Kaiser, 1974).

The Bartlett test indicated a high significance level (Approx. Chi-Square=5721.891,
p<0.000, df=171) and the correlation matrix exhibited good shape. Also, there were 43
(25 percent) non-redundant residuals with values greater than 0.05.

Table 7-2. Results of EFA for Strains and Negative Emotions Model, and Mediation
Model (N=599)

<table>
<thead>
<tr>
<th>Constructs and Items</th>
<th>Factor Loadings</th>
<th>Communality</th>
<th>% of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to Achieve Positive Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FG1</td>
<td>0.89</td>
<td>0.78</td>
<td>5.69</td>
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<tr>
<td>FG2</td>
<td>0.89</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>FG3</td>
<td>0.81</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>Removal of Positive Stimuli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RP1</td>
<td>0.73</td>
<td>0.49</td>
<td>11.43</td>
</tr>
<tr>
<td>RP2</td>
<td>0.82</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>RP3</td>
<td>0.85</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>RP4</td>
<td>0.77</td>
<td>0.60</td>
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<tr>
<td>Anger</td>
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</tr>
<tr>
<td>ANG1</td>
<td>0.81</td>
<td>0.69</td>
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</tr>
<tr>
<td>ANG3</td>
<td>0.91</td>
<td>0.79</td>
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<td>Depression</td>
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<tr>
<td>DEP5</td>
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</tr>
<tr>
<td>DEP6</td>
<td>0.69</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>DEP7</td>
<td>0.65</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>DEP8</td>
<td>0.67</td>
<td>0.60</td>
<td></td>
</tr>
<tr>
<td>DEP9</td>
<td>0.64</td>
<td>0.66</td>
<td></td>
</tr>
</tbody>
</table>
Negative Emotions and Misconduct Model

Table 7-3 presents the results for the Negative Emotions and Misconduct Model. Items in two negative emotion constructs (anger and depression) were analyzed with EFA. With a criteria of eigenvalues greater than 1.0, the two factors were well determined. Both factors accounted for 62.79 percent of total variance in the 12 items tested and the communalities are respectable at above 0.40. The factor loadings of anger ranged from 0.83 to 0.94 and those of depression ranged from 0.63 to 0.89. The KMO score of 0.93 confirmed the sample adequacy. Bartlett test presented an approximate Chi-Square of 4007.907 (df=66) with p<0.000. The non-redundant residuals totaled 33 (50 percent) in the reproduced correlations table. The correlation matrix showed moderate relationships among factors.

<table>
<thead>
<tr>
<th>Constructs and Items</th>
<th>Factor Loadings</th>
<th>Communality</th>
<th>% of Variance</th>
</tr>
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<tbody>
<tr>
<td>Anger</td>
<td></td>
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<td></td>
</tr>
<tr>
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<td>0.68</td>
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<tr>
<td>ANG2</td>
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<td>0.68</td>
<td></td>
</tr>
<tr>
<td>ANG3</td>
<td>0.94</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>DEP1</td>
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<td>DEP2</td>
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<tr>
<td>DEP3</td>
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<td></td>
</tr>
<tr>
<td>DEP4</td>
<td>0.75</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>DEP5</td>
<td>0.88</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>DEP6</td>
<td>0.70</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>DEP7</td>
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<td>0.68</td>
<td></td>
</tr>
<tr>
<td>DEP8</td>
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<td>0.59</td>
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</tr>
<tr>
<td>DEP9</td>
<td>0.63</td>
<td>0.67</td>
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</tr>
</tbody>
</table>

Moderation Model

Table 7-4 presents the results for the Moderation Model. Items in two strain constructs (failure to achieve positive goals and removal of positive stimuli) and items in three conditioning constructs (social support, self-efficacy, and differential association)
were tested to check if each dimension was divided clearly. All items were well loaded into five factors with a criterion of eigenvalues greater than 1.0.

Table 7-4. Results of EFA for Moderation Model (N=599)

<table>
<thead>
<tr>
<th>Constructs and Items</th>
<th>Factor Loadings</th>
<th>Communality</th>
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<td>Failure to Achieve Positive Goals</td>
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</tr>
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<td>FG3</td>
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</tr>
<tr>
<td>Removal of Positive Stimuli</td>
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<td></td>
</tr>
<tr>
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<td>0.48</td>
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<tr>
<td>RP2</td>
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</tr>
<tr>
<td>RP3</td>
<td>0.84</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>RP4</td>
<td>0.75</td>
<td>0.60</td>
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</tr>
<tr>
<td>Social Support</td>
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</tr>
<tr>
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<tr>
<td>SS3</td>
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<td>SS4</td>
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<td>SS5</td>
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<td>0.58</td>
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<td>Self-Efficacy</td>
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<td>0.85</td>
<td>0.72</td>
<td></td>
</tr>
<tr>
<td>SEFF4</td>
<td>0.81</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>SEFF5</td>
<td>0.78</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>SEFF6</td>
<td>0.81</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>SEFF7</td>
<td>0.84</td>
<td>0.70</td>
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</tr>
<tr>
<td>SEFF8</td>
<td>0.84</td>
<td>0.70</td>
<td></td>
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<tr>
<td>Differential Association</td>
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<td></td>
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</tr>
<tr>
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<td>0.67</td>
<td>6.40</td>
</tr>
<tr>
<td>DA2</td>
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<td></td>
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<td>DA3</td>
<td>0.77</td>
<td>0.60</td>
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</tr>
</tbody>
</table>

All five factors for the Moderation Model account for 63.75 percent of total variance of the tested items. The communalities of each item are respectable at above 0.40. The factor loadings ranged from 0.58 to 0.87. The correlation matrix showed moderate relationships among factors. KMO was acceptable as 0.87 by the Kaiser’s
classification (Kaiser, 1974). Bartlett test presented a high significance level (Approx. Chi-Square=7875.229, p<0.000, df=300). Also there were 54 (18 percent) non-redundant residuals with values greater than 0.05.

**Confirmatory Factor Analysis**

After testing underlying factor structures of all latent variables in each model, a full CFA was constructed to examine the factorial validity and the adequacy of fit of factor loadings of the data. CFA is used to inspect patterns of interrelationships among factors and observed items measuring each factor. There are no directional relationships among latent factors because they are correlated to each other in CFA.

The goodness of fit of the CFA model was evaluated. Using Kline’s (2005) method, the Chi-Square test, the Root Mean Square Error of Approximation (RMSEA), including the 90 percent confidence interval (CI), the Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SRMR) were used.

The Chi-Square value ($\chi^2$), representing the Likelihood Ratio Test statistic, refers to the discrepancy between the sample covariance matrix and the population covariance matrix implied by the model. A Chi-Square test of the null hypothesis tests the extent to which the observed and the expected matrices are identical. So the model can be accepted if the Chi-square test fails to reject the null hypothesis. However, because studies show that the Chi-square test is influenced by severity of non-normality, correlation size among observed variables, high proportions of unique variance, and sample size (Brannick, 1995; Byrne 2013; Cheung & Rensvold, 2002; Hoyle, 1995: Kline, 2005), alternative model indices for assessing the validity of fit were
used. Instead, Kline (2005) recommended examination of approximate fit indices, such as RMSEA, CFI, and SRMR, to justify for retaining a model.

CFI is one type of incremental fit index (Bentler, 1990), which assesses the improvement of the fit of a scholar’s model by comparing it with a more restricted model (an independence or null model). The latter assumes no relationships among observed variables. The CFI index is considered sufficient if it measures at 0.90 or above and a good fit if it measures at 0.95 or above (Hu & Bentler, 1999).

RMSEA, a parsimony adjusted index, represents how close the implied matrix is to the observed variance covariance matrix (Bowen & Guo, 2011). A value of 0.00 in RMSEA suggests that the model fits the data exactly. The RMSEA indicates a close approximate fit at less than 0.05 and a reasonable fit at less than 0.08 (Bowen & Guo, 2011; Hair et al., 1995; Hu & Bentler, 1999). RMSEA has the advantage that a confidence interval can be calculated from RMSEA. The lower limit is near 0, while the upper limits is less than 0.08.

SRMR is an absolute measure of fit representing the square root of the difference between the residuals of the sample covariance matrix and the predicted covariance matrix (Hooper, Coughlan, & Mullen, 2008). If the value of SRMR is less than 0.05, the model is deemed as a good fit (Byrne, 2013), but a value of SRMR as high as 0.08 is also acceptable (Hu & Bentler, 1999).

The CFA model was tested to estimate the seven latent variables in this study. The full CFA included the correlations among latent variables, which are comprised of two strains (failure to achieve positive goals and removal of positive stimuli), two
negative emotions (anger and depression), and three conditioning variables (social support, self-efficacy, and differential association).

The results of the initial CFA model showed a moderate fit with $\chi^2=2086.661$, df=608, p=0.000; RMSEA=0.064 (90 percent CI=0.061-0.067); SRMR=0.0501; CFI=0.877. To determine if it was possible to advance the model with improvements, modification indices were consulted. Using the modification indices as criteria, measurement errors of depression, social support, and self-efficacy were freed to be correlated within the same construct, thereby achieving a fairly good model fit.

Table 7-5 presents the results of the revised CFA model. All standardized factor loadings from each item to its latent variables were significant and higher than 0.40 suggesting that they were the best indicators of the latent variables. The overall fit of the model was suggested as an improved fit of the data. All the indices demonstrate a significant fit with: $\chi^2=1252.771$, df=590, p=0.000; RMSEA=0.043 (90 percent CI=0.040-0.047); SRMR=0.0454; CFI=0.945.

Finally, factor scores were created using the imputation function in AMOS.

Table 7-5. Results of CFA with all Latent Variables (N=599)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Unstandardized Factor Loading</th>
<th>Standardized Factor Loading</th>
<th>Standard Error</th>
<th>Critical Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>FG1</td>
<td>1.00</td>
<td>0.83</td>
<td>0.05</td>
<td>19.62***</td>
</tr>
<tr>
<td></td>
<td>FG2</td>
<td>1.04</td>
<td>0.88</td>
<td>0.05</td>
<td>15.77***</td>
</tr>
<tr>
<td></td>
<td>FG3</td>
<td>0.73</td>
<td>0.64</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>RemoPosi</td>
<td>RP1</td>
<td>1.00</td>
<td>0.52</td>
<td>0.12</td>
<td>12.00***</td>
</tr>
<tr>
<td></td>
<td>RP2</td>
<td>1.41</td>
<td>0.75</td>
<td>0.13</td>
<td>12.50***</td>
</tr>
<tr>
<td></td>
<td>RP3</td>
<td>1.57</td>
<td>0.88</td>
<td>0.08</td>
<td>11.55***</td>
</tr>
<tr>
<td></td>
<td>RP4</td>
<td>0.96</td>
<td>0.70</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Anger</td>
<td>ANG1</td>
<td>1.00</td>
<td>0.76</td>
<td>0.05</td>
<td>17.31***</td>
</tr>
<tr>
<td></td>
<td>ANG2</td>
<td>0.85</td>
<td>0.74</td>
<td>0.05</td>
<td>19.34***</td>
</tr>
<tr>
<td></td>
<td>ANG3</td>
<td>1.06</td>
<td>0.85</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Constructs</td>
<td>Items</td>
<td>Unstandardized Factor Loading</td>
<td>Standardized Factor Loading</td>
<td>Standard Error</td>
<td>Critical Ratio</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td>-------------------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Depression</td>
<td>DEP1</td>
<td>1.00</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DEP2</td>
<td>0.68</td>
<td>0.54</td>
<td>0.06</td>
<td>12.42***</td>
</tr>
<tr>
<td></td>
<td>DEP3</td>
<td>0.99</td>
<td>0.67</td>
<td>0.07</td>
<td>15.16***</td>
</tr>
<tr>
<td></td>
<td>DEP4</td>
<td>1.12</td>
<td>0.70</td>
<td>0.07</td>
<td>15.95***</td>
</tr>
<tr>
<td></td>
<td>DEP5</td>
<td>0.90</td>
<td>0.69</td>
<td>0.06</td>
<td>15.60***</td>
</tr>
<tr>
<td></td>
<td>DEP6</td>
<td>1.23</td>
<td>0.81</td>
<td>0.07</td>
<td>18.24***</td>
</tr>
<tr>
<td></td>
<td>DEP7</td>
<td>1.28</td>
<td>0.82</td>
<td>0.07</td>
<td>18.46***</td>
</tr>
<tr>
<td></td>
<td>DEP8</td>
<td>1.10</td>
<td>0.74</td>
<td>0.07</td>
<td>16.61***</td>
</tr>
<tr>
<td></td>
<td>DEP9</td>
<td>1.24</td>
<td>0.81</td>
<td>0.07</td>
<td>18.11***</td>
</tr>
<tr>
<td>Social Support</td>
<td>SS1</td>
<td>1.00</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SS2</td>
<td>0.89</td>
<td>0.71</td>
<td>0.05</td>
<td>17.34***</td>
</tr>
<tr>
<td></td>
<td>SS3</td>
<td>0.64</td>
<td>0.47</td>
<td>0.06</td>
<td>10.96***</td>
</tr>
<tr>
<td></td>
<td>SS4</td>
<td>0.84</td>
<td>0.69</td>
<td>0.05</td>
<td>16.86***</td>
</tr>
<tr>
<td></td>
<td>SS5</td>
<td>0.81</td>
<td>0.61</td>
<td>0.06</td>
<td>14.78***</td>
</tr>
<tr>
<td></td>
<td>SS6</td>
<td>0.79</td>
<td>0.57</td>
<td>0.06</td>
<td>13.64***</td>
</tr>
<tr>
<td></td>
<td>SS7</td>
<td>0.85</td>
<td>0.66</td>
<td>0.05</td>
<td>16.11***</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>SEFF1</td>
<td>1.00</td>
<td>0.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEFF2</td>
<td>1.03</td>
<td>0.66</td>
<td>0.05</td>
<td>22.04***</td>
</tr>
<tr>
<td></td>
<td>SEFF3</td>
<td>1.10</td>
<td>0.77</td>
<td>0.06</td>
<td>17.68***</td>
</tr>
<tr>
<td></td>
<td>SEFF4</td>
<td>1.24</td>
<td>0.82</td>
<td>0.08</td>
<td>16.27***</td>
</tr>
<tr>
<td></td>
<td>SEFF5</td>
<td>1.22</td>
<td>0.85</td>
<td>0.08</td>
<td>15.59***</td>
</tr>
<tr>
<td></td>
<td>SEFF6</td>
<td>1.21</td>
<td>0.83</td>
<td>0.07</td>
<td>16.25***</td>
</tr>
<tr>
<td></td>
<td>SEFF7</td>
<td>1.10</td>
<td>0.81</td>
<td>0.07</td>
<td>15.98***</td>
</tr>
<tr>
<td></td>
<td>SEFF8</td>
<td>1.13</td>
<td>0.79</td>
<td>0.07</td>
<td>15.81***</td>
</tr>
<tr>
<td>Differential</td>
<td>DA1</td>
<td>1.00</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Association</td>
<td>DA2</td>
<td>0.76</td>
<td>0.52</td>
<td>0.09</td>
<td>8.87***</td>
</tr>
<tr>
<td></td>
<td>DA3</td>
<td>0.79</td>
<td>0.61</td>
<td>0.09</td>
<td>9.35***</td>
</tr>
</tbody>
</table>

Note. FailGoal=Failure to Achieve Positive Goals, RemoPosi=Removal of Positive Stimuli. $\chi^2=1252.771$, df=590, $p=0.000$; RMSEA=0.043 (90 percent CI=0.040-0.047); SRMR=0.0454; CFI=0.945. *$p<0.05$, **$p<0.01$, ***$p<0.001$.

**Structural Model**

The structural model used a path model consisting of all observed variables. Bayesian estimation was used to estimate the structural model along with MCMC for model fit. This study used non-informative (diffuse) priors because there was no prior information available for the model.

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This treatment was required because there was no knowledge of how variables in this study were distributed in the population. It is considered as ‘non-informative’ or ‘diffuse’ when the probability of a prior
As described above, a point estimate is the mean of a posterior distribution, while the standard deviation of posterior distribution is understood as the likely distance of the posterior mean and the unknown true parameter, similar to the conventional standard error. The credible interval is a probability statement about the parameter. Not including zero in the credible interval implies a significant effect. Model adequacy was assessed by posterior predictive p-value (PP p-value) suggesting a correct model when the value is near 0.5 while the model is implausible when the p-value is near 0 or 1 (Gelman et al., 2004). Additionally, Bayesian inference includes a summarization of the joint posterior distribution of unknown parameters. AMOS generates and discards 500 burn-in samples by default before drawing the first sample for an analysis to facilitate the MCMC process to converge to a true posterior distribution (Arbuckle, 2012). MCMC methods are used to achieve random draws from the posterior density.

There are several diagnostics to evaluate the convergence in AMOS. Convergence is indicated when the value of the largest convergence statistic (CS) value is less than 1.002. The CS (ideally equal to 1.000) compares the variability within parts of the analysis sample to the variability across these parts (Arbuckle, 2012). Gelman et al. (2004) suggested that values of 1.10 or smaller are sufficient.

Polygon plots, trace plots (time-series plots), and autocorrelation plots were also used to diagnose the convergence of the MCMC simulation (Arcuckle, 2012; Gelman et al., 2004). Polygon plots present a simultaneous display of two estimates based on the first third and the last third of the analysis samples, indicating success when both distribution is spread over a wide range of parameter values. Consequently, the Bayesian analysis with non-informative prior functions is similar to classical likelihood analysis and generates the same results (Gill, 2014).
distributions are identical, and providing evidence that important features of the posterior distribution were identified. The trace plot shows the sampled values of a parameter over time and is expected to show rapid up-and-down variation with no long-term drifts, signifying that the convergence in the posterior distribution occurred rapidly and converged to its stationary distribution. The autocorrelation plot demonstrates the estimated correlations of the sampled values at any interaction and is expected to be close to 0 (Arbuckle, 2012).

**Strains and Misconduct Model**

The first path model tested the relationships between strains and misconduct postulating that each strain would predict police misconduct significantly (Table 7-6). The 67,505 analysis samples were updated after discarding the initial 500 burn-in period samples. The convergence diagnostics (CS=1.0009) indicated that the sample was well approximated to the stationary distribution. The model fitting showed an acceptable level of fit (PP p-value=0.49). Polygons of the misconduct-removal of positive stimuli covariance were almost identical indicating AMOS has established the important features of the posterior distribution. The trace plot demonstrated ideal convergence because there was a rapid up-and-down variation, indicating that the MCMC procedure had forgotten its starting position. The autocorrelation plot indicated that the autocorrelation coefficients were close to 0, meaning that the convergence in distribution was achieved. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs without control variables was 30 percent.\(^5\)

\(^5\) AMOS does not provide the $R^2$ values for a dependent variable from the MCMC output. It was calculated as follows: $R^2 = 1 - \frac{\text{error variance for the dependent variable}}{\text{implied variance of the dependent variable}}$
The results showed that the removal of positive stimuli strains were significant (β=0.134, 95% credible interval: 0.026~0.237). The posterior distribution standard deviation, meaning the likely distance between the posterior mean and the unknown true parameter, was 0.054. In this result, the standardized effect mean of 0.134 indicates that if the removal of positive stimuli strains were to be increased by one standard deviation, the possibility of misconduct would increase by 0.134 standard deviation unit. In other words, the probability associated with the effect of the removal of positive stimuli strains on misconduct is averaged at β=0.134, and there is a 95 percent chance that the effect of the removal of positive stimuli strains on misconduct ranges between 0.026~0.237.

However, the failure to achieve positive goals strains (β=0.019, 95% credible interval: -0.081~0.116) and presentation of negative stimuli strains (β=0.047, 95% credible interval: -0.059~0.151) did not demonstrate any evidence of the effects of strains on misconduct, because a 95 percent credible interval included zero.

Table 7-6. Effects of Strains on Misconduct (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.019</td>
<td>0.050</td>
<td>-0.081~0.116</td>
<td>0.025</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.134*</td>
<td>0.054</td>
<td>0.026~0.237</td>
<td>0.393</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.047</td>
<td>0.054</td>
<td>-0.059~0.151</td>
<td>0.030</td>
</tr>
</tbody>
</table>

Note. PresNega=Presentation of Negative Stimuli. *p< 0.05.

Next, the Strains and Misconduct Model was tested with the control variables, working experience, rank, and education included (Table 7-7). After discarding the initial 500 burn-in period samples, the 38,290 analysis samples were drawn. The CS value was 1.0011, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). Also polygon, trace, and autocorrelation plots were
checked to diagnose the convergence of the MCMC simulation. The convergence diagnostics suggested that the sample is well approximated to the stationary distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs with control variables was 33 percent.

The results showed that the removal of positive stimuli strains had a significant relationship with misconduct ($\beta=0.139$, 95% credible interval: 0.033~0.239). Among the control variables, rank indicated a significant effect on misconduct ($\beta=0.169$, 95% credible interval: 0.028~0.305). The posterior distribution standard deviations of the removal of positive stimuli strains and rank were 0.052 and 0.071, respectively.

### Table 7-7. Effects of Strains on Misconduct with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.048</td>
<td>0.050</td>
<td>-0.051~0.146</td>
<td>0.066</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.139*</td>
<td>0.052</td>
<td>0.033~0.239</td>
<td>0.419</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.045</td>
<td>0.053</td>
<td>-0.061~0.149</td>
<td>0.029</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.052</td>
<td>0.070</td>
<td>-0.086~0.189</td>
<td>0.057</td>
</tr>
<tr>
<td>Rank</td>
<td>0.169*</td>
<td>0.071</td>
<td>0.028~0.305</td>
<td>0.232</td>
</tr>
<tr>
<td>Education</td>
<td>0.050</td>
<td>0.051</td>
<td>-0.052~0.151</td>
<td>0.089</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

In this model with control variable, the standardized effect mean of 0.139 in the removal of positive stimuli strains has increased, compared with that ($\beta=0.134$) of the model without control variables. This model demonstrated that there is a 95 percent chance that the effect of the removal of positive stimuli strains on misconduct ranges between 0.033~0.239. In addition, the standard deviation (SD=0.054→0.052) and a 95 percent credible interval (CI=0.026~0.237→0.033~0.239) of the removal of positive stimuli strains were smaller and narrower, respectively, compared to the model without control variables. This means that a better inference can be drawn about a specific parameter value.
However, the failure to achieve positive goals strains (β=0.048, 95% credible interval: -0.051~0.146) and presentation of negative stimuli strains (β=0.045, 95% credible interval: -0.061~0.149) did not show significant relationships with misconduct. It is notable that only one strain source showed a significant relationship with misconduct considering the GST’s propositions. Including the control variables, only rank showed a significant positive relationship with misconduct even though working experience was also controlled. This is an interesting result, because working experience showed a significant relationship with misconduct in the bivariate statistics (see Table 6-10). Working experience might be considered a positive effect on misconduct, because more officers would be promoted as their working experience became longer.

Therefore, the results of the Strains and Misconduct Model supported only Hypothesis 1b (removal of positive stimuli strains→misconduct path), rejecting Hypotheses 1a (failure to achieve positive goals strains→misconduct path) and 1c (presentation of negative stimuli strains→misconduct path).

Strains and Anger Model

The second path model investigated the relationships between strains and negative emotions, hypothesizing that each strain would cause negative emotions such as anger and depression.

Conducting this model with anger as the endogenous variable (Table 7-8), the 31,197 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value of 1.0003 indicated acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). The proportion of variance (R²) in anger that was explained by latent constructs without control variables was 21 percent. Also, the polygon, trace, and autocorrelation plots were checked to diagnose the
convergence of the MCMC simulation. The convergence statistics showed acceptable convergence.

The results showed that the failure to achieve positive goals strains (β=0.084, 95% credible interval: 0.006~0.160) and removal of positive stimuli strains (β=0.303, 95% credible interval: 0.219~0.385) are statistically significant. The posterior distribution standard deviations were 0.039 and 0.042, respectively. In this model, it is remarkable that the standardized effect mean of 0.303 in the removal of positive stimuli strains presented 3.6 times higher than that of 0.084 in the failure to achieve positive goals strains, indicating that the removal of positive stimuli strains would increase the possibility of anger by 0.303 standard deviation units compared to 0.084 standard deviation units for the failure to achieve positive goals strains. However, the presentation of negative stimuli strains (β=-0.003, 95% credible interval: -0.087~0.080) did not demonstrate a significant effect on anger.

Table 7-8. Effects of Strains on Anger (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.084*</td>
<td>0.039</td>
<td>0.006~0.160</td>
<td>0.049</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.303*</td>
<td>0.042</td>
<td>0.219~0.385</td>
<td>0.395</td>
</tr>
<tr>
<td>PresNega</td>
<td>-0.003</td>
<td>0.043</td>
<td>-0.087~0.080</td>
<td>-0.001</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

Employing anger as the endogenous variable including control variables (Table 7-9), the 43,504 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0002, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.48). The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation. The convergence diagnostics suggested that the sample is well
approximated to the stationary distribution. The proportion of variance ($R^2$) in anger that was explained by latent constructs with control variables was 22 percent.

The results showed that the failure to achieve positive goals ($\beta=0.114$, 95% credible interval: 0.037~0.192), removal of positive stimuli ($\beta=0.296$, 95% credible interval: 0.212~.377), and rank ($\beta=0.157$, 95% credible interval: 0.045~0.268) are all statistically significant. The posterior distribution standard deviations of failure to achieve positive goals strains, removal of positive stimuli strains, and rank were 0.040, 0.042, and 0.057, respectively.

**Table 7-9. Effects of Strains on Anger with Control Variables (N=599)**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.114*</td>
<td>0.040</td>
<td>0.037~0.192</td>
<td>0.067</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.296*</td>
<td>0.042</td>
<td>0.212~0.377</td>
<td>0.386</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.002</td>
<td>0.044</td>
<td>-0.083~0.087</td>
<td>0.001</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>-0.086</td>
<td>0.058</td>
<td>-0.198~0.028</td>
<td>-0.041</td>
</tr>
<tr>
<td>Rank</td>
<td>0.157*</td>
<td>0.057</td>
<td>0.045~0.268</td>
<td>0.094</td>
</tr>
<tr>
<td>Education</td>
<td>0.032</td>
<td>0.042</td>
<td>-0.051~0.114</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

Including control variables, it was noted that the standardized effect mean of 0.114 in the failure to achieve positive goals strains increased, compared to that ($\beta=0.084$) of the Strains and Anger Model without control variables. However, the standardized effect mean of 0.296 in the removal of positive stimuli strains was still 2.6 times larger than the standardized effect mean of 0.114 in the failure to achieve positive goals strains, meaning that the removal of positive stimuli strains would increase the possibility of anger by 2.6 times as many standard deviation units as the failure to achieve positive goals strains.

Among control variables, only rank ($\beta=0.157$, 95% credible interval: 0.045~0.268) demonstrated a significant positive relationship with anger. Working experience ($\beta=$
-0.086, 95% credible interval: -0.198~0.028) and education (β=0.032, 95% credible interval: -0.051~0.114) demonstrated no evidence of relationship with anger. This is also a notable result, because working experience did not show any relationship to anger, even though it might be expected as a predictor for anger due to its potential positive relationship with rank.

Therefore, Hypotheses 2a (failure to achieve positive goals strains→anger path) and 2c (removal of positive stimuli strains→anger path) were supported, while Hypothesis 2e (presentation of negative stimuli strains→anger path) was rejected in the Strain and Anger Model.

**Strains and Depression Model**

With depression as the endogenous variable (Table 7-10), the 24,698 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0003, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.50). The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation. The convergence diagnostics suggested that the sample is well approximated to the stationary distribution. The proportion of variance (R²) in depression that was explained by latent constructs without control variables was 32 percent.

The results showed that the failure to achieve positive goals (β=0.181, 95% credible interval: 0.112~0.248), removal of positive stimuli (β=0.408, 95% credible interval: 0.329~0.485), and presentation of negative stimuli (β=0.082, 95% credible interval: 0.004~0.160) are all statistically significant. The posterior distribution standard deviations of the failure to achieve positive goals strains, removal of positive stimuli
strains, and presentation of negative stimuli strains were 0.036, 0.039, and 0.040, respectively.

Table 7-10. Effects of Strains on Depression (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.181*</td>
<td>0.036</td>
<td>0.110~0.252</td>
<td>0.092</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.385*</td>
<td>0.039</td>
<td>0.310~0.460</td>
<td>0.432</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.082*</td>
<td>0.040</td>
<td>0.004~0.160</td>
<td>0.020</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

The results demonstrated that the removal of positive stimuli strain had the largest effect on depression (β=0.385, 95% credible interval: 0.310~0.460). The standardized effect means of the failure to positive goals strains (β=0.181) and presentation of negative stimuli strains (β=0.082) were less than half those of the removal of positive stimuli strains.

Compared to the Strains and Anger Model (Table 7-8), the standardized effect means, standard deviations, and credible intervals of the failure to positive goals strains (β=0.181, SD=0.036, 95% credible interval: 0.110~0.252) and removal of positive stimuli strains (β=0.385, SD=0.039, 95% credible interval: 0.310~0.460) in this model improved overall. Thus, it may be inferred that the strains would have more significant effects on depression than on anger.

Including control variables (Table 7-11), the 17,440 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0006, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation. The proportion of variance (R² ) in
depression that was explained by latent constructs and control variables was 25 percent.

The results showed that the failure to achieve positive goals strains (β=0.198, 95% credible interval: 0.124~0.268), removal of positive stimuli strains (β=0.378, 95% credible interval: 0.305~0.449), presentation of negative stimuli strains (β=0.089, 95% credible interval: 0.009~0.168), and rank (β=0.133, 95% credible interval: 0.030~0.236) are all statistically significant. The posterior distribution standard deviations of the failure to achieve positive goals strains, removal of positive stimuli strains, and presentation of negative stimuli strains were 0.037, 0.037, and 0.041, respectively.

Table 7-11. Effects of Strains on Depression with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.198*</td>
<td>0.037</td>
<td>0.124~0.268</td>
<td>0.100</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.378*</td>
<td>0.037</td>
<td>0.305~0.449</td>
<td>0.423</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.089*</td>
<td>0.041</td>
<td>0.009~0.168</td>
<td>0.021</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>-0.085</td>
<td>0.053</td>
<td>-0.189~0.020</td>
<td>-0.035</td>
</tr>
<tr>
<td>Rank</td>
<td>0.133*</td>
<td>0.053</td>
<td>0.030~0.236</td>
<td>0.068</td>
</tr>
<tr>
<td>Education</td>
<td>-0.030</td>
<td>0.039</td>
<td>-0.106~0.045</td>
<td>-0.020</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

After including control variables, this model showed that the standardized effect means of the failure to achieve positive goals strains (β=0.181→0.198) and the presentation of negative stimuli strains (β=0.082→0.089) increased, while that of the removal of positive stimuli strains (β=0.385→0.378) decreased slightly. In this model, the removal of positive stimuli strain still had the most significant effect on depression (β=0.378, 95% credible interval: 0.305~0.449), followed by the failure to positive goals strains (β=0.198, 95% credible interval: 0.124~0.268) and the presentation of negative stimuli strains (β=0.089, 95% credible interval: 0.009~0.168).
Compared to the Strains and Anger Model with control variables (Table 7-9), these results demonstrated that the standardized effect means of the failure to positive goals strains ($\beta=0.198$) and removal of positive stimuli strains ($\beta=0.378$) in this model were greater than those ($\beta=0.114$ and $\beta=0.296$, respectively) of the Strains and Anger Model with control model. This indicates that the strains would have greater effects on depression than on anger. Among control variables, rank showed a significant relationship with both depression and anger. However, the standardized effect mean of rank ($\beta=0.133$) in this model was smaller than that of rank ($\beta=0.157$) in the Strains and Anger Model with control variables. Working experience ($\beta=-0.085$, 95% credible interval: $-0.189$~$0.020$) and education ($\beta=-0.030$, 95% credible interval: $-0.106$~$0.045$) did not have effects on depression. It is notable that all strains showed stronger positive relationships with depression rather than with anger.

Therefore, the results of Strains and Depression Model supported Hypotheses 2b (failure to achieve positive goals strains $\rightarrow$ depression path), 2d (removal of positive stimuli strains $\rightarrow$ depression path), and 2f (presentation of negative stimuli strains $\rightarrow$ depression path).

**Negative Emotions and Misconduct Model**

The relationships between two negative emotions, anger and depression, and misconduct were tested (Table 7-12). The 26,556 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0007, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation. The convergence diagnostics suggested that the sample is well approximated to the stationary distribution. The proportion of variance
(R²) in misconduct that was explained by latent constructs was 5 percent. The results showed that only depression (β=0.182, 95% credible interval: 0.021~0.343) is statistically significant. The posterior distribution standard deviations were 0.083 and 0.082, respectively.

Table 7-12. Effects of Negative Emotions on Misconduct (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>0.040</td>
<td>0.083</td>
<td>-0.124~0.199</td>
<td>0.090</td>
</tr>
<tr>
<td>Depression</td>
<td>0.182*</td>
<td>0.082</td>
<td>0.021~0.343</td>
<td>0.477</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

In this result, the standardized effect mean of 0.182 in depression indicated that the possibility of misconduct would increase by 0.182 standard deviation unit if depression were to be increased by one standard deviation.

However, anger (β=0.040, 95% credible interval: -0.124~0.199) did not demonstrate a significant relationship with misconduct. This is a remarkable result, because the GST predicted that anger is the most influential factor on misconduct. However, depression was presented as a significant factor in terms of the relationship with misconduct as well as the strains in this model and Strains and Negative Emotions Model.

The model was tested again with control variables (Table 7-13). The 40,413 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0017, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.48). Also polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation. They suggested that the data were approximated by a stationary distribution. The proportion of variance
(R²) in misconduct that was explained by latent constructs and control variables was 36 percent.

The results showed that depression (β=0.202, 95% credible interval: 0.038~0.360) and rank (β=0.140, 95% credible interval: 0.004~0.273) are statistically significant. The posterior distribution standard deviations of the depression and rank were 0.081 and 0.069, respectively. Anger did not show any significant relationship with misconduct (β=0.021, 95% credible interval: -0.137~0.183).

Table 7-13. Effects of Negative Emotions on Misconduct with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger</td>
<td>0.021</td>
<td>0.082</td>
<td>-0.137~0.183</td>
<td>0.049</td>
</tr>
<tr>
<td>Depression</td>
<td>0.202*</td>
<td>0.081</td>
<td>0.038~0.360</td>
<td>0.541</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.076</td>
<td>0.069</td>
<td>-0.059~0.210</td>
<td>0.084</td>
</tr>
<tr>
<td>Rank</td>
<td>0.140*</td>
<td>0.069</td>
<td>0.004~0.273</td>
<td>0.192</td>
</tr>
<tr>
<td>Education</td>
<td>0.054</td>
<td>0.050</td>
<td>-0.046~0.152</td>
<td>0.095</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

Including control variables, the standardized effect mean of depression has increased from 0.182 to 0.202. This model indicates that there is a 95 percent chance that the effect of depression on misconduct ranges between 0.021~0.343. It should be noted that, among control variables, only rank showed a significant relationship with misconduct as shown in the Strains and Misconduct Model.

Therefore, the results of this model provided support for Hypothesis 3e (depression→misconduct path), while Hypothesis 3a (anger→misconduct path) was rejected.

**Anger Mediation Model**

This path model investigated if negative emotions such as anger and depression would mediate the relationships between strains and misconduct, hypothesizing that the
negative emotion would mediate the relationship between strains and misconduct. The three strains, failure to achieve positive goals strains, removal of positive stimuli strains, and presentation of negative stimuli strains, as exogenous variables, with anger and depression as mediators, and misconduct as an endogenous variable were employed in the mediation model. The negative emotions, anger and depression, were employed separately in each mediation model.

First, this model was tested employing anger as a mediator (Table 7-14).

Table 7-14. Mediating Effects of Anger on the Relationships Between Strains and Misconduct (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIS→FailGoal</td>
<td>0.005</td>
<td>0.049</td>
<td>-0.089~0.100</td>
<td>0.007</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.087</td>
<td>0.055</td>
<td>-0.024~0.194</td>
<td>0.258</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.049</td>
<td>0.053</td>
<td>-0.056~0.151</td>
<td>0.031</td>
</tr>
<tr>
<td>ANG</td>
<td>0.153*</td>
<td>0.050</td>
<td>0.055~0.250</td>
<td>0.348</td>
</tr>
<tr>
<td>ANG→FailGoal</td>
<td>0.085*</td>
<td>0.039</td>
<td>0.007~0.161</td>
<td>0.050</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.303*</td>
<td>0.042</td>
<td>0.220~0.383</td>
<td>0.395</td>
</tr>
<tr>
<td>PresNega</td>
<td>-0.003</td>
<td>0.043</td>
<td>-0.086~0.082</td>
<td>-0.001</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.013*</td>
<td>0.008</td>
<td>0.001~0.030</td>
<td>0.017</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.046*</td>
<td>0.017</td>
<td>0.016~0.081</td>
<td>0.137</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.000</td>
<td>0.007</td>
<td>-0.015~0.014</td>
<td>0.000</td>
</tr>
<tr>
<td>Total Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.018</td>
<td>0.049</td>
<td>-0.076~0.114</td>
<td>0.025</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.133*</td>
<td>0.053</td>
<td>0.027~0.236</td>
<td>0.396</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.048</td>
<td>0.053</td>
<td>-0.057~0.152</td>
<td>0.031</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

The 59,501 analysis samples were updated after discarding the initial 500 burn-in period samples. The CS value was 1.0014, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). The polygon, trace, and autocorrelation plots exhibited that the MCMC procedure converged well. The
proportion of variance ($R^2$) in misconduct that was explained by latent constructs was 6 percent.

In terms of direct effects, the results showed that there were no direct effects of the strains on misconduct. The failure to achieve positive goals strains ($\beta=0.005$, 95% credible interval: -0.089~0.100), removal of positive stimuli strains ($\beta=0.087$, 95% credible interval: -0.024~0.194), and presentation of negative stimuli strains ($\beta=0.049$, 95% credible interval: -0.056~0.151) did not show direct effects on misconduct. These are noteworthy results, considering the significant relationships between removal of positive stimuli strains ($\beta=0.134$, 95% credible interval: 0.026~0.237) and misconduct in the Strains and Misconduct Model (see Table 7-6).

Next, anger had a significant direct relationship with misconduct ($\beta=0.153$, 95% credible interval: 0.055~0.250), while anger did not show any effect on misconduct in the Negative Emotions and Misconduct Model (see Table 7-12). This is interesting, because anger became significant in this model when strains variables were included.

Regarding the direct effects of strains on anger, the failure to achieve positive goals strains ($\beta=0.085$, 95% credible interval: 0.007~0.161) and removal of positive stimuli strains ($\beta=0.303$, 95% credible interval: 0.220~0.383) had significant effects on anger, while the presentation of negative stimuli strains ($\beta=-0.003$, 95% credible interval: -0.086~0.082) did not show a statistical significance on anger. The relationships between strains and anger were similar to those in the Strains and Anger Model (see Table 7-8).

In the indirect relationships, the failure to achieve positive goals strains ($\beta=0.013$, 95% credible interval: 0.001~0.030) and removal of positive stimuli strains ($\beta=0.046$, 95% credible interval: -0.086~0.082) did not show a statistical significance on anger.
95% credible interval: $0.016 \sim 0.081$) showed significant indirect relationships with misconduct through anger. The indirect effect was calculated by multiplying the strains-anger relationship path by the anger-misconduct path. Surprisingly, the failure to achieve positive goals strains showed a significant indirect relationship with misconduct through anger in this anger-included model, while it did not have any significant effect on misconduct in the Strains and Misconduct Model (see Table 7-6).

The results demonstrated that, because there was no direct effect of the three strains on misconduct, anger fully mediated the failure to achieve positive goals strains-misconduct relationships ($\beta=0.013$, 95% credible interval: $0.001 \sim 0.030$) and the removal of positive stimuli strains-misconduct relationships ($\beta=0.046$, 95% credible interval: $0.016 \sim 0.081$). Additionally, the standardized effect mean of 0.046 in the removal of positive stimuli strains showed a 3.5 times larger indirect effect than that ($\beta=0.013$) of the failure to achieve positive goals strains on misconduct. However, the presentation of negative stimuli strains did not have any indirect effect on misconduct ($\beta=0.000$, 95% credible interval: -0.086~0.082).

In terms of the total effect, only the removal of positive stimuli strains had a significant positive effect on misconduct ($\beta=0.133$, 95% credible interval: $0.027 \sim 0.236$). The failure to achieve positive goals strains ($\beta=0.018$, 95% credible interval: -0.076~0.114) and presentation of negative stimuli strains ($\beta=0.048$, 95% credible interval: -0.057~0.152) did not show significant total effects on misconduct. The total effect is the sum of the direct effect and indirect effect in the relationships between strains and misconduct.
Next, the Anger Mediation Model was tested again with the control variables included (Table 7-15). The 45,085 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0016, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.28) (Muthen & Asparouhov, 2012). The proportion of variance ($R^2$) in misconduct that was explained by latent constructs and control variables was 10 percent. The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC simulation, indicating that the analysis samples converged well.

Table 7-15. Mediating Effects of Anger on the Relationships Between Strains and Misconduct with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Direct Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS←FailGoal</td>
<td>0.032</td>
<td>0.049</td>
<td>-0.064~0.129</td>
<td>0.043</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.096</td>
<td>0.055</td>
<td>-0.015~0.202</td>
<td>0.287</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.047</td>
<td>0.054</td>
<td>-0.058~0.152</td>
<td>0.030</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.068</td>
<td>0.069</td>
<td>-0.068~0.201</td>
<td>0.075</td>
</tr>
<tr>
<td>Rank</td>
<td>0.151*</td>
<td>0.069</td>
<td>0.013~0.285</td>
<td>0.208</td>
</tr>
<tr>
<td>Education</td>
<td>0.046</td>
<td>0.051</td>
<td>-0.055~0.145</td>
<td>0.082</td>
</tr>
<tr>
<td>Anger</td>
<td>0.140*</td>
<td>0.049</td>
<td>0.044~0.233</td>
<td>0.325</td>
</tr>
<tr>
<td>Anger←FailGoal</td>
<td>0.085*</td>
<td>0.039</td>
<td>0.007~0.161</td>
<td>0.050</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.302*</td>
<td>0.042</td>
<td>0.219~0.382</td>
<td>0.392</td>
</tr>
<tr>
<td>PresNega</td>
<td>-0.002</td>
<td>0.043</td>
<td>-0.087~0.083</td>
<td>-0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indirect Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.012*</td>
<td>0.007</td>
<td>0.001~0.028</td>
<td>0.08</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.042*</td>
<td>0.016</td>
<td>0.013~0.076</td>
<td>0.06</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.000</td>
<td>0.006</td>
<td>-0.014~0.013</td>
<td>-0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Construct</th>
<th>Total Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.044</td>
<td>0.049</td>
<td>-0.053~0.142</td>
<td>0.059</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.138*</td>
<td>0.053</td>
<td>0.031~0.240</td>
<td>0.415</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.047</td>
<td>0.054</td>
<td>-0.059~0.153</td>
<td>0.030</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

The overall results of this model with control variables included were similar to those of the model without control variables, indicating that the standardized effect means of significant latent variables of this model decreased slightly.
In terms of the direct relationship, there were no direct effects of the strains on misconduct. The removal of positive stimuli strains did not have a significant direct relationship with misconduct in this model ($\beta=0.096$, 95% credible interval: -0.015~0.202), even though it showed a significant effect on misconduct in the Strains and Misconduct Model (see Table 7-7). Similarly, the failure to achieve positive goals strains ($\beta=0.032$, 95% credible interval: -0.064~0.129) and presentation of negative stimuli strains ($\beta=0.047$, 95% credible interval: -0.058~0.152) did not show any relationship with misconduct.

Interestingly, anger ($\beta=0.140$, 95% credible interval: 0.044~0.233) had a significant effect on misconduct, while anger did not show any effect on misconduct in the Negative Emotions and Misconduct Model (see Table 7-13). Among control variables, only rank ($\beta=0.151$, 95% credible interval: 0.013~0.285) had a significant relationship with misconduct. It is notable that the standardized effect mean of 0.151 for rank was larger than that for anger (0.140) in predicting on misconduct. Working experience ($\beta=0.068$, 95% credible interval: -0.068~0.201) and education ($\beta=0.046$, 95% credible interval: -0.055~0.145) did not show statistically significant relationships with misconduct.

In the direct relationship with anger, the failure to achieve positive goals strains ($\beta=0.085$, 95% credible interval: 0.007~0.161) and removal of positive stimuli strains ($\beta=0.302$, 95% credible interval: 0.219~0.382) all had significant effect on anger. It is notable that the standardized effect mean of 0.302 in the removal of positive stimuli strains was still 3.6 times larger than the standardized effect mean of 0.085 in the failure to achieve positive goals strains.
In the indirect relationships, the failure to achieve positive goals ($\beta=0.012$, 95% credible interval: 0.001~0.028) and removal of positive stimuli ($\beta=0.042$, 95% credible interval: 0.013~0.076) had significant indirect relationships with misconduct through anger. The failure to achieve positive goals strains showed a significant indirect relationship with misconduct through anger when anger was included, while it did not have any significant effect on misconduct in the Strains and Misconduct Model (see Table 7-7).

Again, the results showed that anger fully mediated the failure to achieve positive goals strains-misconduct relationships ($\beta=0.012$, 95% credible interval: 0.001~0.028) and removal of positive stimuli strains-misconduct relationships ($\beta=0.042$, 95% credible interval: 0.013~0.076), in that there was no direct effect of the three strains on misconduct. However, anger did not mediate the relationships between the presentation of negative stimuli strains and misconduct ($\beta=0.000$, 95% credible interval: -0.014~0.013). Additionally, the standardized effect mean of 0.042 in the removal of positive stimuli strains showed a 3.5 times greater indirect effect compared to failure to achieve positive goals strains on misconduct.

In terms of the total effect, among the strains, only removal of positive stimuli strains showed a significant effect on misconduct ($\beta=0.138$, 95% credible interval: 0.031~0.240). The failure to achieve positive goals strains ($\beta=0.044$, 95% credible interval: -0.053~0.142) and presentation of negative stimuli strains ($\beta=0.047$, 95% credible interval: -0.059~0.153) did not present significant total effects on misconduct.

Therefore, the results of the Anger Mediation Model demonstrated that Hypotheses 3b (failure to achieve positive goals strains→anger→misconduct path) and
3c (removal of positive stimuli strains→anger→misconduct path) were supported, while Hypothesis 3d (presentation of negative stimuli strains→anger→misconduct path) was rejected.

**Depression Mediation Model**

This path model investigated the mediation relationships between strains and misconduct through depression. The 30,958 analysis samples were updated after discarding the initial 500 burn-in period samples. The CS value was 1.0016, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). Polygon, trace, autocorrelation plots exhibited that the MCMC procedure had achieved convergence in distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs was 6 percent. Table 7-16 shows the results of the model.

**Table 7-16. Mediating Effects of Depression on the Relationships Between Strains and Misconduct (N=599)**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95% CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIS←FailGoal</td>
<td>-0.014</td>
<td>0.049</td>
<td>-0.110~0.082</td>
<td>-0.019</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.067</td>
<td>0.058</td>
<td>-0.048~0.177</td>
<td>0.199</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.033</td>
<td>0.055</td>
<td>-0.077~0.139</td>
<td>0.021</td>
</tr>
<tr>
<td>DEP</td>
<td>0.178*</td>
<td>0.055</td>
<td>0.070~0.285</td>
<td>0.472</td>
</tr>
<tr>
<td>Depre←FailGoal</td>
<td>0.180*</td>
<td>0.035</td>
<td>0.011~0.249</td>
<td>0.092</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.386*</td>
<td>0.038</td>
<td>0.310~0.459</td>
<td>0.433</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.082*</td>
<td>0.039</td>
<td>0.005~0.159</td>
<td>0.020</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.032*</td>
<td>0.012</td>
<td>0.011~0.058</td>
<td>0.043</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.069*</td>
<td>0.022</td>
<td>0.026~0.115</td>
<td>0.204</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.015*</td>
<td>0.008</td>
<td>0.001~0.033</td>
<td>0.009</td>
</tr>
<tr>
<td>Total Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.018</td>
<td>0.049</td>
<td>-0.077~0.113</td>
<td>0.024</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.136*</td>
<td>0.054</td>
<td>0.027~0.240</td>
<td>0.404</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.047</td>
<td>0.055</td>
<td>-0.063~0.154</td>
<td>0.030</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.
There were no direct effects of the strains on misconduct. These results of strains were the same as those in the Anger Mediation Model. The removal of positive stimuli strains did not have a significant direct relationship with misconduct (β=0.067, 95% credible interval: -0.048~0.177), in contrast to the significant effects of the removal of positive stimuli strains on misconduct in the Strains and Misconduct Model (see Table 7-6). Also the failure to achieve positive goals strains (β=-0.014, 95% credible interval: -0.110~0.082) and presentation of negative stimuli strains (β=0.033, 95% credible interval: -0.077~0.139) did not show relationships with misconduct.

However, depression (β=0.178, 95% credible interval: 0.070~0.285) had a significant effect on misconduct. The standardized effect mean of 0.178 in depression was greater than the standardized effect mean of 0.153 in anger in the Anger Mediation Model (see Table 7-14), indicating that depression has a more influential impact on misconduct.

In the relationship with depression, the failure to achieve positive goals strains (β=0.180, 95% credible interval: 0.011~0.249), removal of positive stimuli strains (β=0.386, 95% credible interval:0.310~0.459), and presentation of negative stimuli strains (β=0.082, 95% credible interval: 0.005~0.159) all had significant effects on depression.

Compared to the Anger Mediation Model (see Table 7-14), the presentation of negative stimuli strains became significant in this model with depression mediator. In addition, the standardized effect means of the failure to achieve positive goals strains (β=0.085→0.180) and removal of positive stimuli strains (β=0.303→0.386) increased, meaning that both strains have stronger effects on depression rather than anger.
In the indirect relationships, all strains, the failure to achieve positive goals ($\beta=0.032$, 95% credible interval: 0.011~0.058), removal of positive stimuli ($\beta=0.069$, 95% credible interval: 0.026~0.115), and presentation of negative stimuli strains ($\beta=0.015$, 95% credible interval: 0.001~0.033), had significant indirect relationships with misconduct through depression. Surprisingly, the failure to achieve positive goals strains and representation of negative stimuli strains showed significant indirect relationships with misconduct through depression, while they did not have significant effects on misconduct in the Strains and Misconduct Model (see Table 7-6). Moreover, the presentation of negative stimuli strains did not show a significant indirect relationship with misconduct in the Anger Mediation Model (see Table 7-14).

When compared to the Anger Mediation Model, the standardized effect means of the failure to achieve positive goals strains ($\beta=0.013$→0.032) and removal of positive stimuli strains ($\beta=0.046$→0.069) in the indirect effects in this model increased. In sum, these results indicate that depression was a better mediator than anger on the relationships between strains and misconduct and that depression fully mediated three strains-misconduct relationships.

In terms of the total effect, only the removal of positive stimuli strains had a significant positive effect on misconduct ($\beta=0.136$, 95% credible interval: 0.027~0.240). The failure to achieve positive goals strains ($\beta=0.018$, 95% credible interval: -0.077~0.113) and presentation of negative stimuli strains ($\beta=0.047$, 95% credible interval: -0.063~0.154) did not show significant total effects on misconduct.

Next, the Depression Mediation Model with the control variables included was tested (Table 7-17). The 57,501 analysis samples were drawn after discarding the initial
500 burn-in period samples. The CS value was 1.0009, indicating acceptable convergence. The model fitting was a reasonable level of fit (PP p-value=0.38) (Muthen & Asparouhov, 2012). The polygon, trace, autocorrelation plots exhibited that the MCMC procedure had achieved convergence in distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs and control variables was 35 percent.

Table 7-17. Mediating Effects of Depression on the Relationships Between Strains and Misconduct with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIS←FailGoal</td>
<td>0.016</td>
<td>0.051</td>
<td>-0.084~0.114</td>
<td>0.022</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.073</td>
<td>0.057</td>
<td>-0.040~0.185</td>
<td>0.221</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.031</td>
<td>0.054</td>
<td>-0.076~0.134</td>
<td>0.020</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.071</td>
<td>0.070</td>
<td>-0.067~0.208</td>
<td>0.079</td>
</tr>
<tr>
<td>Rank</td>
<td>0.147*</td>
<td>0.072</td>
<td>0.005~0.287</td>
<td>0.203</td>
</tr>
<tr>
<td>Education</td>
<td>0.059</td>
<td>0.051</td>
<td>-0.041~0.160</td>
<td>0.105</td>
</tr>
<tr>
<td>Depression</td>
<td>0.173*</td>
<td>0.054</td>
<td>0.067~0.276</td>
<td>0.467</td>
</tr>
<tr>
<td>Depre.←FailGoal</td>
<td>0.181*</td>
<td>0.036</td>
<td>0.110~0.251</td>
<td>0.092</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.387*</td>
<td>0.038</td>
<td>0.309~0.460</td>
<td>0.433</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.082*</td>
<td>0.040</td>
<td>0.003~0.159</td>
<td>0.020</td>
</tr>
<tr>
<td>Indirect Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.031*</td>
<td>0.012</td>
<td>0.011~0.057</td>
<td>0.043</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.067*</td>
<td>0.022</td>
<td>0.025~0.111</td>
<td>0.202</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.014</td>
<td>0.008</td>
<td>0.000~0.033</td>
<td>0.009</td>
</tr>
<tr>
<td>Total Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FailGoal</td>
<td>0.047</td>
<td>0.050</td>
<td>-0.051~0.144</td>
<td>0.065</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.140*</td>
<td>0.054</td>
<td>0.033~0.246</td>
<td>0.423</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.045</td>
<td>0.054</td>
<td>-0.062~0.149</td>
<td>0.029</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

Regarding the direct effect, the overall results with control variables were similar to those of this model without control variables. There were no significant effects of strains on misconduct. The removal of positive stimuli strains ($\beta=0.073$, 95% credible interval: -0.040~0.185) was not significant, in contrast to its significant effects in the Strains and Misconduct Model (see Table 7-7). The failure to achieve positive goals
strains (β=-0.016, 95% credible interval: -0.084~0.114) and presentation of negative stimuli strains (β=0.031, 95% credible interval: -0.076~0.134) also did not show significant relationships with misconduct.

Only depression (β=0.173, 95% credible interval: 0.067~0.276) and rank (β=0.147, 95% credible interval: 0.005~0.287) had significant positive relationships with misconduct. Compared to the Anger Mediation Model (see Table 7-15), the standardized effect mean of 0.173 in depression in this model showed more significant effects than the standardized effect mean in anger (β=0.140) in the Anger Mediation Model. However, the standardized effect mean of rank decreased a little (β=0.151→0.147).

In the relationship with depression, the failure to achieve positive goals strains (β=0.181, 95% credible interval: 0.110~0.251), removal of positive stimuli strains (β=0.387, 95% credible interval: 0.309~0.460), and presentation of negative stimuli strains (β=0.082, 95% credible interval: 0.003~0.159) all had significant effects on depression. Still the removal of positive stimuli strains demonstrated the strongest effect on depression among the strains. The effect of presentation of negative stimuli strains on depression was the weakest among the strains. Compared to the Anger Mediation Model (see Table 7-15), the standardized effect means of the failure to achieve positive goals strains (β=0.085→0.181) and removal of positive stimuli strains (β=0.302→0.387) increased, meaning that both strains have stronger effects on depression compared to the effect of anger.

In the indirect relationships, after employing control variables, the presentation of negative stimuli strains (β=0.014, 95% credible interval: 0.000~0.033) became
insignificant in the indirect relationship with misconduct through depression. The other
two strains, the failure to achieve positive goals (β=0.031, 95% credible interval:
0.011~0.057) and removal of positive stimuli (β=0.067, 95% credible interval:
0.025~0.111) had significant indirect relationships with misconduct through depression.
Despite that, the standardized effect means of 0.031 in the failure to achieve positive
goals strains and 0.067 in the removal of positive stimuli strains in the indirect
relationships with misconduct in the Depression Mediation Model were larger than the
standardized effect means of 0.012 in the failure to achieve positive goals strains and
0.042 in the removal of positive stimuli strains in the indirect relationships with
misconduct in the Anger Mediation Model. This indicates that depression mediated
better than anger in the failure to achieve positive goals strains-misconduct relationship
and in the removal of positive stimuli strains-misconduct relationship. Also those two
relationships were fully mediated by depression.

In terms of the total effect, only the removal of positive stimuli strains had a
significant positive effect on misconduct (β=0.140, 95% credible interval: 0.033~0.246).
The failure to achieve positive goals strains (β=0.047, 95% credible interval:
-0.051~0.144) and presentation of negative stimuli strains (β=0.045, 95% credible
interval: -0.062~0.149) did not show significant total effects on misconduct.

Therefore, the results of the Depression Mediation Model demonstrated that
Hypotheses 3f (failure to achieve positive goals strains→depression→misconduct path)
and 3g (removal of positive stimuli strains→depression→misconduct path) were
supported, while Hypothesis 3h (presentation of negative stimuli strains→ depression
→misconduct path) was rejected.
Moderation Model

The relationships between the three conditioning variables and misconduct were tested to see if there are certain relationships between conditioning variables and misconduct. Then the three strains (failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli) and three conditioning variables (social support, self-efficacy, and differential association) were standardized to prevent multicollinearity to examine the moderating effect of the conditioning variables, and interaction terms were created. Each moderation model included the three strains, one conditioning variable (moderator), and three interaction terms.

Conditioning variables and misconduct model

First, the conditioning variables and misconduct model were conducted (Table 7-18). The 41,452 analysis samples were updated after discarding the initial 500 burn-in period samples. The convergence diagnostics suggested that the sample is well approximated to the stationary distribution. The CS value was 1.0011, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.49). The polygon, trace, autocorrelation plots exhibited that the MCMC procedure has converged in distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs was 12 percent.

Table 7-18. Effects of Social Support, Self-Efficacy, and Differential Association on Misconduct (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>-0.006</td>
<td>0.056</td>
<td>-0.116~0.104</td>
<td>-0.013</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>-0.116*</td>
<td>0.055</td>
<td>-0.222~0.008</td>
<td>-0.337</td>
</tr>
<tr>
<td>Diff.Assoc.</td>
<td>0.300*</td>
<td>0.045</td>
<td>0.210~0.388</td>
<td>0.906</td>
</tr>
</tbody>
</table>

Note. Diff.Assoc.=Differential Association. *p< 0.05.
The results showed that self-efficacy ($\beta=-0.116$, 95% credible interval: -0.222~-0.008) and differential association ($\beta=0.300$, 95% credible interval: 0.210~0.388) had significant negative and positive effects on misconduct, respectively. Social support did not show any significant effect on misconduct. The standardized effect mean of 0.300 in the differential association indicated a larger effect on misconduct than the standardized effect mean of -0.116 in self-efficacy.

Next, with control variables (Table 7-19), the 44,153 analysis samples was updated after discarding the initial 500 burn-in period samples. The CS value was 1.0012 indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=.47). Polygon, trace, autocorrelation plots exhibited that the MCMC procedure has well converged in distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs and control variables was 14 percent. The results showed that self-efficacy ($\beta=-0.125$, 95% credible interval: -0.232~-0.018) and differential association ($\beta=0.266$, 95% credible interval: 0.169~0.360) have significant relationships with misconduct. However, social support did not show any significant effect on misconduct. There were no significant relationships from control variables.

Table 7-19. Effects of Social Support, Self-Efficacy, and Differential Association on Misconduct with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support</td>
<td>-0.008</td>
<td>0.056</td>
<td>-0.117~0.103</td>
<td>-0.018</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>-0.125*</td>
<td>0.055</td>
<td>-0.232~-0.018</td>
<td>-0.372</td>
</tr>
<tr>
<td>Diff. Assoc.</td>
<td>0.266*</td>
<td>0.049</td>
<td>0.169~0.360</td>
<td>0.818</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.037</td>
<td>0.069</td>
<td>-0.099~0.170</td>
<td>0.040</td>
</tr>
<tr>
<td>Rank</td>
<td>0.084</td>
<td>0.070</td>
<td>-0.053~0.219</td>
<td>0.114</td>
</tr>
<tr>
<td>Education</td>
<td>0.068</td>
<td>0.050</td>
<td>-0.031~0.166</td>
<td>0.119</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.
After employing control variables, the standardized effect mean of self-efficacy became stronger ($\beta=-0.116 \rightarrow -0.125$), while the standardized effect mean of differential association decreased ($\beta=0.300 \rightarrow 0.266$). Considering the results of the bivariate statistics (see Table 6-10), it is remarkable that rank ($\beta=0.084$, 95% credible interval: -0.053~0.219), as well as working experience ($\beta=0.037$, 95% credible interval: -0.099~0.170) and education ($\beta=0.068$, 95% credible interval: -0.031~0.166), did not show a significant relationship with misconduct.

Social support moderation model

This model tested the moderating effect of social support on the relationships between the three strains and misconduct (Table 7-20). The 34,936 analysis samples were updated after discarding the initial 500 burn-in period samples. The CS value was 1.0008, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.47). The polygon, trace, and autocorrelation plots showed that the MCMC procedure had forgotten its starting position, indicating that the convergence in distribution was achieved. The proportion of variance ($R^2$) in misconduct explained by latent constructs and interaction terms was 5 percent.

The results showed that social support did not show a significant effect on misconduct ($\beta=-0.098$, 95% credible interval: -0.206~0.013) and it did not moderate the relationships between strains and misconduct. In other words, the strains and social support did not interact in their effects on misconduct. Among the strains, only removal of positive stimuli ($\beta=0.129$, 95% credible interval: 0.016~0.243) had a significant effect on misconduct. Similar to the results in the Strains and Misconduct Model (see Table 7-6), the failure to achieve positive goals strains ($\beta=-0.020$, 95% credible interval:........
-0.127~0.087) and presentation of negative stimuli strains (β=0.051, 95% credible interval: -0.058~0.159) did not have significant effects on misconduct.

Table 7-20. Moderating Effects of Social Support on the Strains-Misconduct Relationships (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>-0.020</td>
<td>0.055</td>
<td>-0.127~0.087</td>
<td>-0.030</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.129*</td>
<td>0.058</td>
<td>0.016~0.243</td>
<td>0.191</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.051</td>
<td>0.055</td>
<td>-0.058~0.159</td>
<td>0.075</td>
</tr>
<tr>
<td>Social Sup.(SS)</td>
<td>-0.098</td>
<td>0.056</td>
<td>-0.206~0.013</td>
<td>-0.146</td>
</tr>
<tr>
<td>FailGoal x SS</td>
<td>-0.018</td>
<td>0.051</td>
<td>-0.120~0.082</td>
<td>-0.026</td>
</tr>
<tr>
<td>RemoPosi x SS</td>
<td>0.047</td>
<td>0.060</td>
<td>-0.071~0.164</td>
<td>0.076</td>
</tr>
<tr>
<td>PresNega x SS</td>
<td>0.000</td>
<td>0.053</td>
<td>-0.104~0.102</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

With control variables included (Table 7-21), the 31,761 analysis samples were collected after discarding the initial 500 burn-in period samples. The CS value was 1.0019, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.44). The polygon, trace, and autocorrelation plots demonstrated an ideal convergence. The proportion of variance (R²) in misconduct that explained by latent constructs, interaction terms, and control variables, was 11 percent.

The results showed no interaction term had a significant relationship with misconduct. Only removal of positive stimuli strains (β=0.143, 95% credible interval: 0.026~0.263) and rank (β=0.159, 95% credible interval: 0.018~0.296) had significant effects on misconduct. The significant relationships of the removal of positive stimuli strains and rank with misconduct were similar to the results for these parameters in the Strains and Misconduct Model (see Table 7-7).
The failure to achieve positive goals strains ($\beta=0.017$, 95% credible interval: -0.095~0.130), presentation of negative stimuli strains ($\beta=0.047$, 95% credible interval: -0.062~0.154), and social support ($\beta=-0.074$, 95% credible interval: -0.185~0.038) did not have significant effects on misconduct. Except for rank, working experience ($\beta=0.056$, 95% credible interval: -0.081~0.194) and education ($\beta=0.057$, 95% credible interval: -0.043~0.157) did not have significant relationships with misconduct.

Therefore, the results of the Social Support Moderation Model showed that Hypotheses 4a (failure to achieve goals strains x social support $\rightarrow$ misconduct path), 4b (removal of positive stimuli strains x social support $\rightarrow$ misconduct path), and 4c (presentation of negative stimuli strains x social support $\rightarrow$ misconduct path) were all rejected.

**Self-efficacy moderation model**

This path model investigated the moderating effect of self-efficacy on the relationships between strains and misconduct (Table 7-22). The 31,040 analysis samples were updated after discarding the initial 500 burn-in period samples. The CS
value was 1.0019, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.47). The polygon, trace, and autocorrelation plots exhibited an ideal convergence. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs and interaction terms was 5 percent.

The results showed that self-efficacy did not show any significant moderating effect on the relationships between strains and misconduct, even though self-efficacy ($\beta=-0.120$, 95% credible interval: -0.226~0.011) had a significant negative effect on misconduct. Among the strains, only removal of positive stimuli strains ($\beta=0.124$, 95% credible interval: 0.015~0.233) showed a significant relationship with misconduct.

### Table 7-22. Moderating Effects of Self-Efficacy on the Strains-Misconduct Relationships (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>-0.033</td>
<td>0.054</td>
<td>-0.138~0.073</td>
<td>-0.049</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.124*</td>
<td>0.056</td>
<td>0.015~0.233</td>
<td>0.186</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.036</td>
<td>0.061</td>
<td>-0.088~0.154</td>
<td>0.054</td>
</tr>
<tr>
<td>Self-Efficacy(SEFF)</td>
<td>-0.120*</td>
<td>0.055</td>
<td>-0.226~0.011</td>
<td>-0.180</td>
</tr>
<tr>
<td>FailGoal x SEFF</td>
<td>0.010</td>
<td>0.048</td>
<td>-0.084~0.103</td>
<td>0.013</td>
</tr>
<tr>
<td>RemoPosi x SEFF</td>
<td>-0.006</td>
<td>0.065</td>
<td>-0.130~0.121</td>
<td>-0.007</td>
</tr>
<tr>
<td>PresNega x SEFF</td>
<td>0.011</td>
<td>0.070</td>
<td>-0.128~0.148</td>
<td>0.013</td>
</tr>
</tbody>
</table>

Note. *p< .05.

The failure to achieve positive goals strains ($\beta=-0.033$, 95% credible interval: -0.138~0.073) and presentation of negative stimuli strains ($\beta=0.036$, 95% credible interval: -0.088~0.154) did not have significant effects on misconduct.

Next, the self-efficacy moderation model with conditioning variables was tested (Table 7-23). The 64,078 analysis samples were drawn after discarding the initial 500 burn-in period samples. The CS value was 1.0016, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.45). The polygon, trace, and autocorrelation plots were checked to diagnose the convergence of the MCMC
simulation. The convergence diagnostics suggested that the sample was well approximated to the stationary distribution. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs, interaction terms, and control variables, was 11 percent.

The results showed that self-efficacy did not show a significant moderating effect on the relationships between strains and misconduct, even though self-efficacy ($\beta=-0.118$, 95% credible interval: -0.221~-0.010) had a significant negative effect on misconduct. Similar to the results in this model without control variables, only removal of positive stimuli strains ($\beta=0.130$, 95% credible interval: 0.021~0.233) and rank ($\beta=0.167$, 95% credible interval: 0.027~0.304) were statistically significant. The failure to achieve positive goals strains ($\beta=-0.002$, 95% credible interval: -0.108~0.106) and presentation of negative stimuli strains ($\beta=0.033$, 95% credible interval: -0.085~0.151) did not have significant effects on misconduct.

Table 7-23. Moderating Effects of Self-Efficacy on the Strains-Misconduct Relationships with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>-0.002</td>
<td>0.055</td>
<td>-0.108~0.106</td>
<td>-0.002</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.130*</td>
<td>0.054</td>
<td>0.021~0.233</td>
<td>0.198</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.033</td>
<td>0.060</td>
<td>-0.008~0.151</td>
<td>0.051</td>
</tr>
<tr>
<td>Self-Efficacy(SEFF)</td>
<td>-0.118*</td>
<td>0.054</td>
<td>-0.221~0.010</td>
<td>-0.180</td>
</tr>
<tr>
<td>FailGoal x SEFF</td>
<td>0.001</td>
<td>0.048</td>
<td>-0.092~0.098</td>
<td>0.002</td>
</tr>
<tr>
<td>RemoPosi x SEFF</td>
<td>-0.001</td>
<td>0.064</td>
<td>-0.128~0.123</td>
<td>-0.002</td>
</tr>
<tr>
<td>PresNega x SEFF</td>
<td>0.008</td>
<td>0.067</td>
<td>-0.122~0.141</td>
<td>0.009</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.049</td>
<td>0.070</td>
<td>-0.088~0.187</td>
<td>0.056</td>
</tr>
<tr>
<td>Rank</td>
<td>0.167*</td>
<td>0.071</td>
<td>0.027~0.304</td>
<td>0.235</td>
</tr>
<tr>
<td>Education</td>
<td>0.057</td>
<td>0.051</td>
<td>-0.045~0.156</td>
<td>0.104</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

Therefore, Hypotheses 4d (failure to achieve goals strains x self-efficacy $\rightarrow$ misconduct path), 4e (removal of positive stimuli strains x self-efficacy $\rightarrow$ misconduct path), and 4h (presentation of negative stimuli strains x self-efficacy $\rightarrow$ misconduct path)
path), and 4f (presentation of negative stimuli strains x self-efficacy→misconduct path) were not supported at all.

**Differential association moderation model**

This model tested the moderating effect of differential association (Table 7-24). The 45,915 analysis samples were updated after discarding the initial 500 burn-in period samples. The CS value was 1.0014, indicating an acceptable convergence. The model fitting was acceptable level of fit (PP p-value=0.47). The polygon, trace, and autocorrelation plots showed that the MCMC procedure had forgotten its starting position, indicating that the convergence in distribution was achieved. The proportion of variance (R²) in misconduct that was explained by latent constructs and interaction terms was 12 percent.

The results showed that no interaction term had a significant relationship with misconduct. Only differential association (β=0.284, 95% credible interval: 0.185~0.381) had a significant effect on misconduct. Even though the standardized effect mean of 0.284 in differential association indicated a strong effect on misconduct, the interaction terms of strains and differential association did not show significant relationships with misconduct.

Table 7-24. Moderating Effects of Differential Association on the Strains-Misconduct Relationships (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.018</td>
<td>0.048</td>
<td>-0.074~0.112</td>
<td>0.027</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.022</td>
<td>0.062</td>
<td>-0.099~0.143</td>
<td>0.032</td>
</tr>
<tr>
<td>PresNega</td>
<td>0.005</td>
<td>0.062</td>
<td>-0.119~0.125</td>
<td>0.008</td>
</tr>
<tr>
<td>Diff.Assoc.(DA)</td>
<td>0.284*</td>
<td>0.050</td>
<td>0.185~0.381</td>
<td>0.426</td>
</tr>
<tr>
<td>FailGoal x DA</td>
<td>0.068</td>
<td>0.049</td>
<td>-0.028~0.165</td>
<td>0.116</td>
</tr>
<tr>
<td>RemoPosi x DA</td>
<td>0.012</td>
<td>0.068</td>
<td>-0.119~0.147</td>
<td>0.011</td>
</tr>
<tr>
<td>PresNega x DA</td>
<td>0.065</td>
<td>0.068</td>
<td>-0.067~0.202</td>
<td>0.077</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.
It is interesting that the removal of positive stimuli strains, which had a significant relationship with misconduct in other moderation models, did not show any significant relationship with misconduct (β=0.022, 95% credible interval: -0.099~0.143).

Including control variables (Table 7-25), the 81,969 analysis samples were collected after discarding the initial 500 burn-in period samples. The CS value was 1.0018, indicating acceptable convergence. The model fitting was an acceptable level of fit (PP p-value=0.45). The polygon, trace, and autocorrelation plots demonstrated an ideal convergence. The proportion of variance ($R^2$) in misconduct that was explained by latent constructs, interaction terms, and control variables, was 15 percent.

Table 7-25. Moderating Effects of Differential Association on the Strains-Misconduct Relationships with Control Variables (N=599)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardized Effect Mean</th>
<th>SD</th>
<th>95%CI</th>
<th>Unstandardized Effect Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailGoal</td>
<td>0.038</td>
<td>0.049</td>
<td>-0.057~0.133</td>
<td>0.057</td>
</tr>
<tr>
<td>RemoPosi</td>
<td>0.044</td>
<td>0.062</td>
<td>-0.078~0.167</td>
<td>0.067</td>
</tr>
<tr>
<td>PresNega</td>
<td>-0.002</td>
<td>0.063</td>
<td>-0.127~0.119</td>
<td>-0.004</td>
</tr>
<tr>
<td>Diff.Assoc.(DA)</td>
<td>0.238*</td>
<td>0.054</td>
<td>0.131~0.343</td>
<td>0.368</td>
</tr>
<tr>
<td>FailGoal x DA</td>
<td>0.068</td>
<td>0.048</td>
<td>-0.027~0.163</td>
<td>0.116</td>
</tr>
<tr>
<td>RemoPosi x DA</td>
<td>0.010</td>
<td>0.066</td>
<td>-0.118~0.144</td>
<td>0.009</td>
</tr>
<tr>
<td>PresNega x DA</td>
<td>0.077</td>
<td>0.067</td>
<td>-0.053~0.214</td>
<td>0.092</td>
</tr>
<tr>
<td>WorkExperience</td>
<td>0.048</td>
<td>0.067</td>
<td>-0.085~0.180</td>
<td>0.054</td>
</tr>
<tr>
<td>Rank</td>
<td>0.087</td>
<td>0.071</td>
<td>-0.054~0.224</td>
<td>0.121</td>
</tr>
<tr>
<td>Education</td>
<td>0.068</td>
<td>0.051</td>
<td>-0.033~0.169</td>
<td>0.124</td>
</tr>
</tbody>
</table>

Note. *p< 0.05.

The results showed that no interaction term had a significant relationship with misconduct. Only differential association (β=0.238, 95% credible interval: 0.131~0.343) had a significant effect on misconduct, even though the standardized effect mean of differential association decreased a little (β=0.284→0.238). Similar to this model without control variables, none of the three strains had a significant relationship with misconduct. In terms of control variables, they did have significant effect on misconduct.
It is surprising that the removal of positive stimuli strains ($\beta=0.044$, 95% credible interval: -0.078~0.167) and rank ($\beta=0.087$, 95% credible interval: -0.054~0.224) did not have significant effects on misconduct, considering both variables were significant in the relationships with misconduct in most other models.

Therefore, Hypotheses 4g (failure to achieve positive goals strains x differential association→misconduct path), 4h (removal of positive stimuli strains x differential association→misconduct path), and 4i (presentation of negative stimuli strains x differential association→misconduct path) were all rejected.
CHAPTER 8
DISCUSSION

The present study was undertaken to apply GST to police misconduct in South Korea, with the long-term goal of improving the quality of life of police officers in South Korea and their service to the community. As stated in the introduction, there is minimal research analyzing police stress and police misconduct from the perspective of criminal theory. Furthermore, studies conducted on police misconduct have ignored specific characteristics of police work, such as their changing shifts, the violence they face and the crime scenes they encounter. Therefore, the results of this study will provide insight into the causes of police stress and how to predict and resolve matters of future strain.

This study sought to answer four research questions:

- Can the strains specified in Agnew’s GST (1992) predict misconduct in South Korean officers?
- Do strains cause negative emotions in South Korean officers?
- What, if any, are the mediating effects of negative emotions on strain and misconduct?
- Can coping strategies moderate the relationship between strains and police misconduct?

Data were collected from officers in South Korea via a survey method and the structural equation modeling (SEM) with AMOS was used for data analysis with Bayesian estimation. Chapter 8 provides a summary and discussion of the significant findings of the statistical analysis.

**Summary of Findings**

The summary of findings can be divided into five parts: 1) Strains and Misconduct Model; 2) Strains and Negative Emotions Model; 3) Negative Emotions and Misconduct Model; 4) Mediation Model; and 5) Moderation Model.
Overall, the study found that GST was useful as a foundation for explaining police misconduct among South Korean officers.

In the Strains and Misconduct Model, the results showed that removal of positive stimuli strains had a significant positive relationship with misconduct. After including control variables, rank indicated a significant effect on misconduct. Failure to achieve positive goals and presentation of negative stimuli strains did not appear to have any significant impact on misconduct.

In the Strains and Negative Emotions Models, officers experiencing failure to achieve positive goals and removal of positive stimuli strains said they dealt with anger and depression, while officers facing presentation of negative stimuli strains reported only experiencing depression. After including control variables, only rank had a significant relationship with anger and depression. Lastly, the inclusion of control variables did not change the previous results of the strain-emotion relationships, with failure to achieve positive goals and removal of positive stimuli strains still significantly related with anger and depression, and presentation of negative stimuli strains with depression only.

In the Negative Emotions and Misconduct Model, depression was found to have a significant statistical relationship with misconduct. After including control variables, the depression-misconduct relationship was still significant and only rank had a significant relationship with misconduct.

In the Mediation Models, anger and depression were both examined as mediating variables separately. In the Anger Mediation Model, there were no direct effects of the strains on misconduct, but anger had a direct effect on misconduct.
Failure to achieve positive goals and removal of positive stimuli strains had a direct effect on anger. Failure to achieve positive goals and removal of positive stimuli strains showed indirect relationships with misconduct through anger. The total effect of removal of positive stimuli on misconduct was significant. After testing with control variables, the overall results did not change the previous results in the Mediation Model. In the same way, anger mediated the positive relationship between failure to achieve positive goals and removal of positive stimuli strains and misconduct.

In the Depression Mediation Model, there were no direct effects of the strains on misconduct, but depression had a direct effect on misconduct. Failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli strains had a direct effect on depression. All three strains (failure to achieve positive goals, removal of positive stimuli, and presentation of negative stimuli strains) showed significant indirect relationships with misconduct through depression, while only two strains (failure to achieve positive goals, removal of positive stimuli strains) had significant indirect relationships with misconduct in the model employing control variables. The total effect of removal of positive stimuli strains on misconduct was significant. After testing for control variables, depression mediated the positive relationship between failure to achieve positive goals and removal of positive stimuli strains and misconduct. Rank had a significant positive relationship with misconduct.

In the Moderation Models, no conditioning variables moderated the effect of strains on misconduct even though self-efficacy and differential association had significant direct effects on misconduct. Social support did not show any significant
effect on misconduct. There were no changes in the results after testing for control variables.

**Discussion**

In evaluating the results, it is essential to remember that there may be a causality (time-order) problem. The GST explicitly hypothesizes the causal ordering of strains, leading to negative emotions, leading to delinquency. However, in this cross-sectional study, the strains and misconduct were measured over a five-year period, but the surveys were completed in the two months immediately following the five-year period. In addition, the causal ordering is a persistent effect that is not restricted to an identifiable time period. Therefore, the outcomes in this study may investigate the covariance among these variables.

**Strains and Misconduct Model**

Regarding the Strains and Misconduct Model, this study found that removal of positive stimuli strains had a positive relationship with police misconduct, as well as the control variables of working years, rank, and education. This finding was consistent with other studies analyzing the relationship between removal of positive stimuli strains and delinquency (Agnew, 1992; Mazerolle & Piquero, 1998; Mazerolle et al., 2003). Our study suggests that in Asian Societies, failure to achieve positive goals strains, which include experiencing strain that one believes is undeserved (Agnew, 2006) and presentation of negative stimuli strains do not directly cause individuals to become deviant. This can be interpreted to mean that the failure to achieve positive goals and the presentation of negative stimuli might not be main causes of strains of officers in Asian society.
While it was predicted that failure to achieve positive goals and presentation of negative stimuli strains would have a positive relationship with misconduct, the cultural context of Asian society can possibly explain why there was no significance. Respect for elders and others, and family-oriented filial duty in general, are highly valued in Asian societies. Therefore, individuals may have fewer personal goals, and more community and family-oriented goals. Officers are encouraged to improve the community and the force rather than their own personal status. Therefore, it would be unlikely for officers to complain when personal goals are not met or they encounter unfair situations. Also, the collectivism culture and conservative policing characteristics, such as keeping the order for society and following strict disciplinary rules, may cause officers to defer seriously pursuing or advancing their goals, and rather maintain their goals or and avoid negative problems.

As for presentation of negative stimuli strains, given the standardization of all police agencies, and the lower average crime rate in South Korea compared to Western countries, there are probably fewer negative factors that officers face daily, therefore decreasing the odds of an officer reacting with misconduct. Even when experiencing stressful life events, South Korean officers may endure such occasions with relatively lower strain because they have already become accustomed to the danger and trauma associated with their work. Officers may have higher levels of coping abilities against these traumatic situations.

Another reason could be the fact that the majority of officers in the sample are highly ranked and experienced. This suggests that the higher-ranked and experienced officers seem to have achieved what they think they deserved within the police
organization (e.g., failure to achieve positive goals) and have less chance to directly confront dangerous crime scenes and angry citizens (e.g., presentation of negative stimuli).

However, it should be noted that rank indicated a significant effect on misconduct even though working experience was controlled. It could possibly be the case that higher-ranked positions, compared to longer working experiences, have more discretion and administrative power in police organizations, and receive substantial respect or special treatment from citizens. Therefore, these benefits originating from higher rank could possibly be the cause of their misconduct.

Out of the three strains tested in this study, it is not surprising that removal of positive stimuli strains would generate strain in South Korean officers, given the cultural context of their working environment. Officers are expected to work long hours, night shifts, and even respond to crime scenes when off duty. Furthermore, stress from work can cause irritability and anxiety when home, causing loved ones to withdraw and leading to home or marital problems, as well as creating rifts with co-workers while on the job. It is well-known that, unlike Western societies, which promote individualism, family and community ties are strong in Asian societies and losing time with family and friends because of work, as well as being restricted from talking about the specifics of the job, can cause great strain on personal relationships and, in turn, create great strain for officers. In addition, the police organization harbors a culture of social isolation (Daniello, 2011), causing officers to have more difficulty relating to average people. This social isolation may make losing valuable relationships with loved ones even harder to bear.
Rank’s positive relationship with police misconduct is surprising, given that prior research has shown that as rank increases, misconduct decreases (Kang & Nalla, 2011; Vitale, 2014; White & Kane, 2013). However, other studies have found that rank and misconduct have a positive relationship. Kim (2002) found that many higher-ranked police officers had been arrested for bribery and abuse of authority in terms of money-related businesses. Bazley et al. (2006) examined the frequency and types of force and resistance encountered in administering law enforcement by focusing on the differences between rank, specifically between detectives and patrol officers. Similar to the present study, and also unexpectedly, the authors found that detectives used greater force than patrol officers. However, Bazley et al. (2006) did not control officer’s working experiences and this could have impacted the results of their study.

Table 6-2 shows that officers involved in more than one internal investigation accounted for 44 percent for inspectors and 48 percent for senior inspectors or higher, while the percentages for the officers ranked as assistant inspector or lower only 21 percent to 35 percent. To understand this finding, it is once again important to consider the cultural and religious setting of Asian societies. It is possible that higher-ranked officers are older than entry-level officers and are therefore given more respect, based on the ideals of Confucianism. In Confucianism, the higher ranks in a government organization can govern above the public domain and influence every area of an officer’s private life. The rank may be considered an officer’s identity or the most important symbol of social position in bureaucratic Asian societies. Therefore, the effect of rank seems to be more influential in the Asian Confucian countries, and possibly differs considerably from Western countries. This could enable higher-ranked officers to
become involved in misconduct, given there is less management monitoring their actions and less chance for individuals to speak out against them. Furthermore, in any occupation, once attaining high status, especially the highest expected level, it is more likely and accepted for an employee to be less ambitious. With little room left for promotion in an organizational pyramid, there may be less pressure to perform at the highest level.

An additional explanation for this finding involves the manner in which internal investigations are held. As mentioned in the measurement section, the internal investigations can be initiated not only by citizen’s complain, but also by the AID’s audit and inspection, and a supervisor’s report. Additionally, an organizational context for the internal investigation should be understood. When dealing with misconduct cases, especially those with significant social repercussion, the centralized and hierarchical KNPA can make supervisors, or elder officers, take administrative responsibility for their subordinates’ misconduct. Similar to Western police forces, most operational tasks are conducted in pairs. However, in South Korea, each pair generally consists of a lower-ranking officer and a supervisor, as opposed to two officers of the same rank, as is practiced in the U.S. Therefore, even if it is the lower-ranking officer who commits a form of misconduct, the supervisor can also be held responsible and be the subject of an internal investigation for presumably neglecting his duties to monitor his subordinate. As a result, the reported misconduct among higher-ranked officials may become greater. Although, it should be indicated that this data alone cannot distinguish those different sources of misconduct investigations.
However, this is unlikely to be the most influential reason for these findings. If it were, we would see a much smaller gap in the number of internal investigations experienced by senior officers and lower-ranked officers, given that both officers would be involved in the investigation. Further research is needed to confirm these findings and determine the root cause for increased misconduct among higher-ranking officers.

**Strains and Negative Emotions Model**

The next two models focus on the negative emotions mentioned in Agnew’s GST (1992). The Strains and Negative Emotions Model considered anger and depression and found that the majority of the strains listed in GST had an effect on both.

Given the inward-nature of Asian societies, it may be expected that when exposed to negative factors out of one’s control, the individual would first resort to depression rather than anger. All three strains had positive relationships with depression, while only failure to achieve positive goals and removal of positive stimuli strains were predictive of anger in South Korean police officers. The results showed that officers feeling any one of these three strains experience feelings of anger or depression. This finding is consistent with Agnew’s GST (1992) as well as the results of many additional prior studies (Agnew, 2001, 2006; Ganem, 2010). From the results of this model, the greatest effect power was observed for removal of positive stimuli strains, followed by failure to achieve positive goals strains. These results implied that the removal of positive stimuli strains were the most influential factors on the relationships with officers’ negative emotions.

Surprisingly, presentation of negative stimuli strains did not have an effect on anger in South Korean officers. Consistent with the first model, which found no significance between presentation of negative stimuli strains and misconduct, this strain
does not appear to have an effect on anger in most South Korean officers. Again, this could be attributed to the officers’ coping abilities in dealing with dangerous or traumatic situations, the inability to speak out when presented with negative stimuli, or the standardization of agencies and lower crime rate in South Korea. As a similar explanation in the Strains and Misconduct Model, the higher-ranked and experienced officers, who accounted for the majority of the sample, may not work often in a dangerous crime scene or in an arresting situation that involves resisting citizens. Therefore, this lack in the presentation of negative stimuli would not lead to anger.

However, presentation of negative stimuli strains showed a significant positive effect on depression. It should be noted, from our findings, that the presentation of negative stimuli strains may lead officers to feel depressed (inward emotion), rather than angry (outer emotion), indicating that Confucianism and collectivism may influence officers’ emotional responses by making them react inwardly or passively. Based on cultural studies, this is the most significant difference between Westerners and Asians based on the cultural studies.

The results also showed that higher-ranked officers were more likely to report experiencing anger and depression. One possible explanation for these results may be that higher-ranked officers in this sample, who are located in the middle of the organizational hierarchy, may experience difficulties bridging the relationships between even higher-ranked supervisors and lower-ranked line officers. As officers move up in rank, they are expected to handle more responsibility in fulfilling work orders and supervising line officers’ activities, therefore increasing organizational strain without proportionately increasing authoritative powers. That is, it is possibly difficult for officers
of intermediate rank to be authoritative, due to fear of losing the respect of the subordinate officers and not fulfilling the superiors’ managerial rules.

The increased organizational responsibility higher-ranked officers incur on a daily basis can cause them to feel stress and in turn become angry or depressed. Given the cultural expectation not to resist authority or the norm, it is not surprising that rank was positively related to anger and depression.

**Negative Emotions and Misconduct Model**

The Negative Emotions and Misconduct Model revealed similar findings as previous studies and showed that depression was statistically significant in predicting misconduct (Broidy & Agnew, 1997; Jang & Johnson, 2003; Ostrowsky & Messner, 2005; Peirce et al., 1994; Piquero & Sealock, 2004; Sigfusdottir et al., 2004). When measured alone without strains, anger was not predictive of misconduct, although many studies have shown a significant relationship between anger and misconduct (Brezina, 1998; Broidy, 2001; Capowich et al., 2001; Jang & Johnson, 2003; Kaufman, 2009; Mazerolle & Piquero, 1998; Simons et al., 2003; Tittle et al., 2008). Given the community-oriented and introverted culture of Asian societies, it is not surprising that depression is a more acceptable emotion when experiencing stress and would therefore be a stronger predictor of misconduct compared to anger. Emotional states, such as experiencing a rush of anger, are frowned upon and generally not seen as an emotional response among Asian individuals. As observed in previous models, rank was also found to be a significant predictor of misconduct in officers.

These findings are different from those of prior studies (Brezina, 1998; Broidy, 2001), which argued that anger is more influential in predicting deviant behaviors. However, given the great emphasis of collectivism and Confucianism on inward emotion
and self-critical attitude, depression may be a more significant predictor for misconduct in South Korean officers. This can be supported by the culture surrounding the police work environments in South Korea. Similar to Western police today, South Korean officers may feel isolated from citizens and media, because they abused their legal powers in the past, causing violation of citizens’ rights and lower levels of citizens’ trust. Inside the organization, highest-ranked supervisors have applied severe legal and moral disciplinary actions to officers who behaved inappropriately, and the strongly centralized national police agency has also harshly managed the entire police organizations. Therefore, officers tend to become depressed, rather than angry, when experiencing stressful situations. These characteristics may be common in the South Korean police culture.

**Mediation Model**

The most interesting findings were observed in the Mediation Model, in which anger and depression were separately tested as mediating variables for strain and misconduct. As predicted in the GST, in the anger and depression Mediation Models, there were no significant direct effects of strains on misconduct, even though removal of positive stimuli strains showed a positive effect on misconduct in the previous Strains and Misconduct Model. Another interesting point of the mediation model is that anger made a significant effect on misconduct after employing strains in a model. Based on these results, the negative emotions may play important roles in the relationships between strains and misconduct. The relationships between both constructs (strains and negative emotions) seemed to conform well to the GST’s proposition that negative emotions mediate the effects of strains on misconduct.
After separately testing the model with anger and depression as the mediating variables, it was found that failure to achieve positive goals and removal of positive stimuli strains had positively significant effects on anger and depression. Interestingly, presentation of negative stimuli strains only showed a significant effect on depression, not anger. As in aforementioned arguments, experiencing negative accidents or life events in Asian culture may lead to an inward emotion, such as depression, in South Korean officers due to collectivism, Confucianism, and their work environments. Similar to the results of Negative Emotions and Misconduct Model, strains classified under removal of positive stimuli were the most influential in predicting negative emotions.

In the indirect effect through anger, only failure to achieve positive goals and removal of positive stimuli strains demonstrated indirect effects on misconduct. Similarly, in the indirect effect through depression, only two strains, failure to achieve positive goals and removal of positive stimuli strains, showed significant indirect effects on misconduct. Without control variables, all three strains demonstrated indirect effects through depression on misconduct. However, the indirect effect of removal of positive stimuli strains on misconduct in both mediation models was more influential than those of any other strains. The effect powers of failure to achieve positive goals and removal of positive stimuli strains on misconduct in the depression mediation model were higher than those in the anger mediation model, supporting the fact that, overall, depression had a more significant effect in mediating strain with misconduct. This is supported by prior research focusing on the relationships between strain, depression and crime (Broidy & Agnew, 1997; Jang & Johnson, 2003; Ostrowsky & Messner, 2005; Peirce et al., 1994; Piquero & Sealock, 2004; Sigfusdottir et al., 2004). Therefore, the results
showed that the negative emotions fully mediated the relationships between failure to achieve positive goals and removal of positive stimuli strains and misconduct in South Korean officers.

The GST proposes that the strains have direct effects on delinquency as well as indirect effects through negative emotions (especially anger). An individual commits crime to relieve negative emotions generated by strains. However, few researches have tested the GST’s basic proposition with a full model including the three strains and negative emotions (Broidy, 2001). Hence, these results are meaningful, in that the mediating effects of the negative emotions differed by the type of strains and the negative emotions played important roles when determining misconduct, even in South Korean officers, as Agnew (1992) proposed.

In line with the GST, South Korean officers were more likely to commit misconduct when they experienced the failure to achieve positive goals strains and removal of positive stimuli strains through anger and depression. The results also suggested that an officer feeling depression from the removal of positive stimuli strains would have the highest risk for misconduct. On the other hand, it implied that an officer who easily becomes angry should be careful to avoid opportunities of experiencing the failure to achieve positive goals strains and removal of positive stimuli strains.

In terms of strains, the significant indirect effect of the failure to achieve positive goals strains is important when considering the applicability of GST to Asian cultures. Agnew (1992) suggested that failure to achieve positive goals strains, specifically unjust strains, are the most influential in predicting misconduct, while this study showed that the removal of positive stimuli strains proved to be more influential.
Regarding control variables, only rank showed a statistically significant positive effect on misconduct in the mediation model. Moreover, rank has been demonstrated as an influential factor on misconduct or negative emotions throughout all the models.

In sum, even though anger is not the most significant negative emotion in this data, both negative emotions revealed their mediating efficacies in explaining police misconduct. Likewise, Agnew (2014) identified that different societies would show different effects of strains and negative emotions due to an individual’s subjective and cultural interpretations of situations.

**Moderation Model**

In the Conditioning Variables and Misconduct Model, only two conditioning variables, self-efficacy and differential association, but not social support, showed significant effects on misconduct, in agreement with the findings of Tittle et al. (2008). It should be noted that the effect power of differential association on misconduct was double the effect of self-efficacy.

Social support helps officers develop their abilities to cope with stress (Lazarus, 1991; Thoits, 2010), and scholars have argued that social support alleviates an individual’s psychological and physiological distress (Johnson & Morris, 2008; Pearlin et al., 1981; Taylor & Stanton, 2007; Thoits, 1995). South Korean officers’ lack of social support coping strategies may come from the social isolation of police and Confucianism’s influence regarding losing face when one seeks help, therefore leading to more frequent instances of depression. Consequently, the Social Support Moderation Model did not demonstrate its moderating effect on the relationship between strains and misconduct.
In the Self-Efficacy Moderation Model, even though self-efficacy had a negative effect on misconduct, it did not show any moderating effect. These results are similar to those of other studies showing no conditioning effect (Aseltine et al., 2000; Johnson & Morris, 2008). It is obvious that self-efficacy functions differently in Asian countries and Western countries. Many studies have compared the score levels of self-efficacy of cultural groups (Eaton & Dembo, 1997; Scholz et al., 2002). Due to the police culture and collectivism, South Korean officers may believe that it is their primary responsibility to follow organizational rules and accommodate citizens’ demands, and that feeling confident and caring for their own goals is of less importance.

In the Differential Association Moderation Model, differential association failed to show any moderating effect on misconduct, even though its direct effect on misconduct was positively significant. These results were not supported by Agnew’s (2015) argument that deviant peers and values condition the effect of strain on criminal activity. Another interesting result is that when differential association, the removal of positive stimuli strains, and rank were employed in a model together, the removal of positive stimuli strains and rank did not have any significant effect on misconduct. The relationships between those variables should be investigated in future research. These results suggested that the effects of the removal of positive stimuli strains and rank on misconduct might be spurious relationships. Therefore, these results call for further investigation in terms of the relationships of differential association, strains, and control variables. In addition, other social learning issues influencing delinquency, such as the number of deviant friends and the frequency of deviant associations, need to be handled for improving the differential association measurement. It is possible that the
measurement used in this study (i.e., the number of deviant friends) may not be sufficient to examine the conditioning effect.

**Implications**

**Policy Implications**

This study examined the relationships between strains, negative emotions, and conditioning variables (i.e., coping strategies). This whole process, which is a key to applying GST to deviance (Agnew, 1992), will be useful in designing new strategies for preventing or reducing officers' strains and misconduct.

The results of this study indicate that officers should reduce their exposure to failure to achieve positive goals and removal of positive stimuli strains. Officers should be encouraged to keep their valuable social relationships with family, friends, and close others due to the detrimental effects of removal of positive stimuli strains. Officers should be protected from losing their valuable time and social life because removal of positive stimuli strains were the most influential in explaining police misconduct in this study. The significant influence of removal of positive stimuli strains was expected, given the support for Confucianist ideals in South Korean Culture. South Korean officers have not been helped to reduce the stress from dangerous and emotionally difficult working environments (Park, 2014). As put forth by many psychologists, strains increase the risk of officers' physical and psychological problematic consequences, as well as behavioral problems (McEwen, 2000).

Based on this study's results, it is recommended that the South Korean police organization provide psychological treatment for officers in situations of chronic stress. However, the characteristics of Asian culture emphasizing social reputation and the indifferences of the highest supervisors in the KNPA have hindered initiation of an
officers’ treatment program. Fortunately, the KNPA set up a treatment center for officers with the Post Traumatic Syndrome Disorder (PTSD) in a governmental general hospital in June 2013. This was stimulated by the results of a national survey of 17,311 police officers indicating that 30.7 percent of sworn officers experience a dangerous level of PTSD (Park, 2014). This is serious outcome when compared to 7 percent to 19 percent in the US (LeBlanc, Regehr, Jelley, & Barath, 2007). Therefore, the PTSD center should employ psychological treatment specialists who have received a consulting training for police officers and build nation-wide offices for easy access. In particular, officers’ treatment in that facility should be confidential; otherwise, officers would not participate in the treatment program for fear of disclosing their identities. Officers may think that a disclosure can cause misperceptions of their qualifications as police by other officers’, leading to disadvantages in personnel advances. Importantly, identifying officers at high risk for experiencing severe strains or negative emotions will be essential to maintaining a healthy organization. Treatments and identification processes need to work in concert to overcome these issues. Also, as usual, the supervisors and the AID should monitor those officers focusing on the certain risk factors with direct or indirect contacts and intervene when the risks start to degenerate.

Organizational justice, as a part of the failure to achieve positive stimuli strains, should be established, because injustice may be an important strain leading to misconduct. Rewards and punishments should be implemented fairly and with respect for the officers’ feelings. In addition, the highest ranked supervisors need to relax the strict hierarchical organizational culture and stimulate line officers working in dangerous and unmanageable situations, to help them avoid depressive psychological conditions.
In terms of the threshold level of strains, officers should be assigned to work places that are compatible with their abilities, so that their work stress does not exceed manageable stress limits. Because coping resources are different for each person, officers’ should be treated carefully with these considerations in mind.

Most of all, given our results suggesting depression as an important mediator in strain and misconduct relationships, efforts should focus on reducing officers’ depression, as well as alleviating the failure to achieve positive goals strains and removal of positive stimuli strains. More effort should be placed on avoiding negative emotions, because it is difficult for an officer to avoid strains ingrained in the nature of police work.

In terms of the conditioning variables, even though there were no moderating effects on misconduct, self-efficacy and differential association revealed significant negative and positive effects, respectively, on misconduct, indicating that officers need to increase self-efficacy coping strategies and reduce association with friendly officers who promote deviant acts.

**Theoretical Implications**

This study expanded GST’s usefulness to South Korean officers. It is the first study to apply GST’s main concepts in testing officers’ misconduct, including the three main strain categories, two prominent negative emotions, and three conditioning variables. Several theoretical implications can be gained from this study.

First, this study found a meaningful impact of officers’ strains on misconduct with all three strains and negative emotions in a model in accordance with the GST’s main propositions. Thus, examination of officers’ misconduct with the full concepts of GST has been valuable. It provided important information about how different groups (police)
experience strains and negative emotions and how differently they cope with them. This study demonstrated that the effects of different types of strains on misconduct may not be the same. Also this study shows the utility of testing strains and negative emotions together to explain deviance. Without negative emotions, a study model may produce different results from the relationships between strains and deviance.

Second, the failure to achieve positive stimuli strains were tested using an accurate measure possible by the GST. Most prior studies focused on the failure to achieve positive goals strains as merely goal blockage strains. But it is important that this study measured the failure to achieve positive goals strains with goal blockage as well as unjust outcome strains, which are ignored by other studies. Also, in this study, goal blockage included factors other than the monetary or status goals argued by the classical strain theorists. Regarding the measurement of goal blockage, this study used the disjunction between expectations and actual achievements suggested as influential by Agnew (1992).

Third, in terms of a weak effect of the presentation of negative stimuli strains, the measurement methods need to be considered. Agnew (2001) explained that a simple checklist survey study could miss detailed strain information related to magnitude and injustice. The data in the present study may possibly reflect trivial strains, because participants would not report more serious strains. Moreover, as presented by Agnew (1992) and other stress scholars (Lazarus, 1991; Seyle, 1976), there may be a different threshold level of strains which can cumulatively generate negative emotions and deviance. This may influence the effect of the presentation of negative stimuli strains. It is possible that relatively safe policing environments and the attitudes of government
officers as good citizens in South Korea could possibly reduce the frequency of the presentation of negative stimuli strains.

Even though this study investigated individual level variables, the results showed that GST can be expanded from Western use, its current application, and explain the mechanism of strains and misconduct in Asian societies. Anger and depression demonstrated their strong mediating effects on the relationships between failure to achieve positive goals and removal of positive stimuli strains. These two emotions helped improve the generalization of applying GST to South Korean officers. Even though this study revealed some differences in the effect powers among strains and negative emotions, it revealed that the important relationships among the main concepts (strains, negative emotions, and delinquency), of the GST can be applied as universal.

However, more research is needed to determine whether failure to achieve positive goals and presentation of negative stimuli strains could cause deviant behaviors in other samples. Regarding the mediating effects, the possibility that presentation of negative stimuli strains could be mediated by negative emotions in groups other than police officers should be examined in order to generalize the GST.

Regarding the insignificant moderating effects in this study, Agnew (2006) explained that insignificance of moderating variables occur because it is difficult to examine survey data for interaction effects, suggesting that other methods, such as experimental, evaluation, vignette, and observational studies, be used to collect more detailed information. Another explanation is that the conditioning variables’ moderating effects depend on other conditioning variables. For example, even students with lower levels of problem-solving ability may not commit crime when they have a high level of
social support from parents. Therefore, the inefficient capabilities of the coping strategies need more research in terms of individuals’ circumstances and abilities.

Among the conditioning variables, social support and differential association could be types of behavioral coping, while self-efficacy could be a cognitive coping strategy. Considering the three coping dimensions of Agnew (1992), the results of this study suggest that coping strategies for officers’ strains need to be studied in terms of emotion-focused coping, rather than cognitive and behavioral coping. For example, the use of medicine (e.g., stimulants), physical exercise, meditation, and relaxation are emotional coping strategies. This coping skill may be useful when cognitive and behavioral coping do not succeed (Agnew, 1992).

Regarding the conditioning variables, this study limited the number of variables to three (social support, self-efficacy, and differential association). For a full understanding of possible moderating effects, criminal justice scholars need to test other conditioning variables, such as self-esteem, low constraint, and religiosity, together to see if those variables moderate the relationship between strains and misconduct.

Limitations

There are several limitations in this study. As described above, temporal ordering in this study makes it difficult to gain a true picture of the causal relationship from strains to emotions and misconduct. Methodologically, SEM can examine multiple constructs and indicators at the same time for causal relations. However, the cross-sectional analysis in this study pertains to a specific period of time (2010-2014). But the survey questions asked about participants’ negative emotions for the last two months of that period. Thus, as described above, the results may not reflect the causal relationships.
Second, due to secondary data usage, there may be sampling errors. It is of great value to collect sensitive data, such as ethnic or racial origin, political opinion, or religious beliefs, of officers with misconduct experiences with a convenience sampling method, because it is difficult to collect such information from official data or random sampling. However, the data collected by convenience sampling may not be representative of the general South Korean police population. Nonprobability sampling methods, such as convenience sampling, cannot assure that the entire population has the same chance to participate in a study.

Third, survey implementation conducted in one metropolitan police agency in South Korea may lead to concerns regarding external validity. The city is located in the south eastern area of the country. There are six metropolitan cities and many more midsize cities. Even though South Korea has one national police agency and a strong hierarchical organization, there is a possibility of having geographical variations in the police population. A more valid examination of South Korea officers would have been possible if survey research from more cities had been conducted.

Fourth, in terms of sample distribution, it should be taken into consideration that the skewed distribution of the higher-ranked and experienced officers in these data could possibly mislead the inference about those control variables. If the study group includes more higher-ranked and experienced officers than lower-ranked and inexperienced officers, the information obtained from our inference may be skewed toward the higher-ranked and experienced officers.

Fifth, the measurement of misconduct involved formal or informal experiences of internal investigations, which reflect broad understanding of officers’ misconduct. The
number of experiences of internal investigation is sensitive information for some officers and could decrease the integrity of participants’ answers. Even though most of the misconduct performed by South Korean police are minor issues and all officers’ identities and their departments were anonymous to prevent this threat, participants may still hesitate to reveal their honest answers.

Also, it needs to be noted that officers who commit misconduct, as well as the supervisors of those officers, can all be investigated in an internal investigation in an influential case. While supervisors are not always investigated along with their subordinates, it is possible that their involvement can skew the numbers of actual acts of misconduct per officer. This type of investigation is centered on managerial responsibility, in that the supervisor may have neglected supervision of line officers. As a result, the supervisor may be subjected to disciplinary action as well as the officer committing misconduct. On the other hand, internal investigations initiated by the AID’s unexpected audits and inspections, and supervisors’ observations of lower-ranked officers’ suspected behaviors could bias the misconduct measurement.

Another limitation regarding the operationalization of the dependent variable arises because the misconduct captured in the survey was not evaluated based on the severity or types of misconduct. The measurement of the dependent variable focused on the frequency of the investigation experiences, not the seriousness of the offenses. This should be considered carefully before interpreting the study results. However, it is logical to assume that officers having more frequent experiences of internal investigations are more likely to exhibit various and possibly more major forms of misconduct.
Lastly, accuracy is an important criterion of causality. There may be other negative emotional variables such as fear and frustration, Agnew argued, which can cause misconduct. Also an insufficient number of conditioning variables examined in this study may be a concern in terms of falsity because not all the variables with moderating effects observed in prior studies were included.

**Future Research**

One recommendation for future research is collection of longitudinal data of the same officer group committing misconduct to test causal relationships among constructs. Furthermore, in spite of the difficulties of obtaining a random sample, replications of this study need to be conducted with randomly distributed samples in other locations and departments to provide more meaningful knowledge on misconduct.

Based on this study, future research needs to apply GST to diverse occupational populations with more job-related strains. Because this study utilized individual level variables, the effects of cultural and organizational level variables should be examined further in the future. Different types of strains, such as subjective, objective, experienced, vicarious, and anticipated strains, will provide more information about the generality of GST. Also the magnitude of each strain needs to be examined. There may be positive life events which can mitigate the negative effects of strains (Thoits, 1983). Future research needs to check the balance of positive and negative life events to better predict their effects.

Agnew argued that particular emotional states lead to a specific type of criminal behavior and few studies have focused on that aspect. Future research needs to study whether certain emotional states can mediate the relationships between certain strains and misconduct. In terms of negative emotions as emotional states which Agnew
argued are conducive to crime, future studies are needed focusing of the strength of the emotions because the intensity of emotions varies among individuals.

Future research should examine more detailed issues from conditioning variables that are known as influential in GST studies. Regarding the differential association variable as it conditioned the effects of the removal of positive stimuli strains and rank on misconduct, future studies need to examine the relationships between conditioning variables, strains, and other control variables because those relationships may mislead the causal relationships. Also more research on differential association is needed to determine whether the proportion of (Sutherland, 1947) or frequency of interaction with deviant friends (officers) influences an officer's misconduct.

Lastly, further research is needed to determine the significance of rank when predicting misconduct. This study’s findings, while supported by several recent studies, do not agree with the majority of the literature. Understanding why higher-ranked officers are more likely to experience internal investigations for misconduct can help improve the police organization and deter from future incidences of misconduct.
APPENDIX
SURVEY QUESTIONNAIRES

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[Police Misconduct]

How many times have you been a defendant under the formal or informal internal investigation over the past five years?
A. none   B. 1   C. 2   D. 3   E. 4   F. 5 and more

[Failure to Achieve Positive Goals]

(Goal blockage) How successful have you been at reaching your goals in each of the above-listed dimensions over the past five years?
(0=very successful, 1=successful, 2=somewhat successful, 3= not at all successful)
A. Academic/Career goals
B. Social/Family life goals
C. Health/Appearance goals

(Unfair outcomes) How fair have outcomes concerning your goals in each of the above-listed dimensions been over the past five years?
(0=very fair, 1=fair, 2=somewhat fair, 3=not at all fair)
A. Academic/Career goals
B. Social/Family life goals
C. Health/Appearance goals

[Removal of Positive Stimuli and Presentation of Negative Stimuli]

How often have you experienced each of the life events on the list over the past five years?
(0=never, 1=once, 2=two, 3=three times, 4=four, 5=five or more times)
1. Breaking up with an intimate partner
2. Getting into a disagreement/argument with a close friend
3. Having a close friend or intimate partner move away
4. Moving away from a close friend or intimate partner
5. Having or being responsible for an unplanned pregnancy
6. Getting in a car accident
7. Being a victim of a crime
8. Being physically harassed or abused
9. Being discriminated against on the basis of your sex, religion, or sexual orientation

[Anger]

(0 = never, 1=seldom, 2=sometimes, 3 =often, 4 = almost always (daily))
How often in the past two months have you...
1. Felt irritable, like exploding.
2. Had arguments at home.
3. Lost your temper over little things.

[Depression]

(0 = never, 1=seldom, 2=sometimes, 3 =often, 4 = almost always (daily))
How often in the past two months have you...
1. Lost your appetite.
2. Had crying spells.
3. Had stomach pains.
4. Had headaches.
5. Had nausea, vomiting.
6. Felt unable to keep going.
7. Spent time daydreaming.
8. Felt worthless.
9. Had numerous fears

[Social Support]

(0=not at all, 1=very little, 2=somewhat, 3=quite a bit, 4=very much)
1. How much do you feel that coworkers care about you?
2. How much do you feel that supervisors care about you?
3. How much do you feel that your parents care about you?
4. How much do you feel that your friends care about you?
5. How much do you feel that people in your family understand you?
6. How much do you feel that you and your family have fun together?
7. How much do you feel that your family pays attention to you?

[Self-Efficacy]

(1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree)
1. I will be able to achieve most of the goals that I have set for myself.
2. When facing difficult tasks, I am certain that I will accomplish them.
3. In general, I think that I can obtain outcomes that are important to me.
4. I believe I can succeed at most any endeavor to which I set my mind.
5. I will be able to successfully overcome many challenges.
6. I am confident that I can perform effectively on many different tasks.
7. Compared to other people, I can do most tasks very well.
8. Even when things are tough, I can perform quite well.

[Differential Association]

(0=none, 1=1-2, 2=3-4, 3=5-6, and 4=over 7)
1. How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for general misconduct (to the best of your knowledge)?
2. How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for civilian complaints (to the best of your knowledge)?
3. How many of the coworkers that you consider to be among your best or closest friends have been defendant(s) in an internal investigation for neglect of duty (to the best of your knowledge)?
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BIOGRAPHICAL SKETCH

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