

ASPECTS OF GOALS AND REWARDS SYSTEMS  
AS ANTECEDENTS OF ABUSIVE SUPERVISION:  
THE MEDIATING EFFECT OF HINDRANCE STRESS

MARY BARDES

B.S. The College of New Jersey, 2000

M.B.A. Rutgers University, 2004

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## ABSTRACT

In this study, I draw on research on goal setting, stress, and aggression to examine contextual antecedents of abusive supervision. I suggest that a characteristic of the supervisors' goals (viz., goal difficulty) can contribute to abusive supervisory behaviors through the effect it has on the supervisors' level of hindrance stress. I also propose that this mediating process is moderated by two characteristics of the supervisors' rewards (viz., goal-contingent reward and reward interdependence). Thus, I suggest a moderated mediation model predicting supervisors' hindrance stress acts as a mediator of the relationship between supervisors' difficult goals and abusive supervision. Moreover, I also posit that the mediation is stronger when the supervisors' rewards are contingent on goal attainment and their subordinates' performance. With a sample of 257 supervisor-subordinate dyads, I find that supervisors' hindrance stress partially mediates the relationship between supervisors' difficult goals and abusive supervision. However, the results revealed that this mediating effect is not moderated by the characteristics of the supervisors' rewards that were examined. The theoretical and practical implications of this study are identified and future research is discussed.

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## CHAPTER ONE: INTRODUCTION

Recently, there has been a surge of interest in harmful behaviors in the workplace. Although the majority of this research focuses on deviant employee behaviors (see Bennett & Robinson, 2003, for a review), researchers have recently begun to examine deviant behaviors at the supervisory level. Much of this research falls under the heading of *abusive supervision* (Tepper, 2000) and focuses on negative non-physical supervisory actions, such as having angry outbursts, ridiculing others, invading others' privacy, and taking credit for others' successes.

Abusive supervision is defined as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000: p. 178). For the most part, past research on abusive supervision has focused on the negative effects this type of supervisory behavior can have on employees in particular and the organization as a whole (e.g., job and life dissatisfaction; Tepper, 2000; dysfunctional resistance; Tepper, Duffy, & Shaw, 2001; deviant behavior; Mitchell & Ambrose, 2007; psychological distress; Tepper, Moss, Lockhart, & Carr, 2007; decreases in productivity and firm performance; Hmieleski & Ensley, 2007). Recently, however, some researchers have begun to examine antecedents of abusive supervision (e.g., organizational injustice; Tepper, Duffy, Henle, & Lambert, 2006; Aryee, Chen, Sun, & Debrah, 2007; psychology contract violation; Hoobler & Brass, 2006) and have found that aspects of the work context can contribute to abusive behavior at the supervisory level.

In line with this research, the purpose of this study is to examine additional contextual antecedents of abusive supervision. In particular, the study examines aspects of goal setting theory (Locke & Latham, 1990) as contextual factors that can contribute to abusive supervision. Although the extant research on goal setting strongly supports the notion that challenging goals have positive effects on outcomes such as employee motivation and performance (see Locke & Latham, 1990, for a review), some have recently suggested that there are instances when goals can have unintended and negative consequences (e.g., Schweitzer, Ordóñez, & Douma, 2004; Latham & Locke, 2006; Barsky, 2008). Consistent with this notion of negative consequences of goal setting, the primary purpose of this study is to examine aspects of goals and reward systems as contextual antecedents of abusive supervision.

I draw on research on goal setting theory, the cognitive theory of stress, and workplace aggression to suggest that a characteristic of the supervisors' goals (viz., goal difficulty) can contribute to abusive supervisory behaviors through the effect it has on the supervisors' levels of hindrance stress. I also propose that this mediating process may be more likely to occur when certain contextual variables are present. Specifically, I posit that the relationship between supervisors' difficult goals and hindrance stress may be moderated by a characteristic of the supervisors' rewards (viz., goal-contingent reward – the extent to which supervisory rewards are contingent on goal attainment) and the relationship between supervisors' hindrance stress and abusive supervision may be moderated by an additional characteristic of the supervisors' rewards (viz., reward interdependence – the extent to which supervisory rewards are dependent on the performance of their subordinates). Thus, this moderated mediation model may help to explain

the relationship between supervisors' difficult goals and abusive supervision by revealing that supervisors' hindrance stress mediates the relationship. Moreover, the mediation may be stronger when supervisors' rewards are contingent on both goal attainment and their subordinates' performance. These hypothesized relationships are depicted in Figure 1.

The remainder of this paper unfolds in the following ways. First, I provide brief reviews of the abusive supervision literature and related literatures. Second, I present extant research on goal setting and stress. Third, I integrate this research with research on aggression to provide support for my specific hypotheses. Then, the method and analyses used for testing the hypotheses are provided. Finally, I report my results and discuss the implications of this research.

## CHAPTER TWO: LITERATURE REVIEW

### Abusive Supervision

#### Consequences of Abusive Supervision

The cost of abusive supervision can be substantial, in terms of both psychological costs to the victims of abuse and financial costs to the organization. Research has found that abusive supervision is associated with a number of negative individual outcomes, including job and life dissatisfaction, work and family conflict, intentions to quit (Tepper, 2000), psychological distress (Tepper et al., 2007), deviant behaviors (Mitchell & Ambrose, 2007), and counterproductive behaviors (Detert, Treviño, Burris, & Andiappan, 2007). Abusive supervision has also been found to be financially costly to organizations in that it results in increases in employee absenteeism and health care costs (Tepper et al., 2006) and decreases in productivity and firm performance (Hmieleski & Ensley, 2007).

#### Antecedents of Abusive Supervision

Although the consequences of abusive supervision have received considerable attention (see Tepper, 2007, for a review), there is a paucity of research on the antecedents of this behavior. Only three studies have explicitly examined antecedents of abusive supervision (e.g., Tepper et al., 2006; Hoobler & Brass, 2006; Aryee et al., 2007). These studies focused on

contextual factors as predictors of abusive supervision by examining negative events in the workplace that can contribute to a supervisor's abusive behavior. Independently, both Tepper et al. (2006) and Aryee et al. (2007) found that organizational injustice was associated with abusive supervision. Additionally, Hoobler and Brass (2006) concluded that psychological contract violation (i.e., the perception that the organization did not give what was promised) also correlated with abusive behavior at the supervisory level.

In addition to identifying contextual factors that are related to abusive supervision, these studies investigated supervisors' and subordinates' characteristics that moderate and/or mediate the context-abusive supervision relationship. Tepper et al. (2006) found that supervisors' depression mediated the relationship between procedural injustice and abusive supervision, and that the mediation effect was moderated by subordinates' negative affectivity (NA), such that this relationship only existed when subordinates were high on NA. Hoobler and Brass (2006) examined supervisors' hostile attribution bias (i.e., the tendency to assume that others' have hostile intentions) as a moderator of the relationship between psychological contract violation and abusive supervision. They found that the relationship was significantly stronger when supervisors scored high on hostile attribution bias. Also, Aryee et al. (2007) concluded that the relationship between interactional injustice and abusive supervision was significantly stronger when supervisors scored high on authoritarianism, defined as the belief that dominance and control are appropriate forms of leadership.

Researchers have only just begun to understand the predictors of abusive supervision. Therefore, there is still much work to be done in explaining the factors that contribute to abusive

supervisory behavior. The primary purpose of this study, therefore, is to contribute to this limited research domain by examining whether additional contextual factors, namely goals and reward systems, predict a supervisor's abusive behavior. Before presenting my theoretical rationale for this model, I first provide a brief review of constructs that are related to abusive supervision.

### Brief Review of Related Research

Over the last 15 years, researchers have begun to examine the dark, or destructive, side of leadership behaviors. Much of this research has fallen under the heading of abusive supervision. However, other research has been conducted on constructs that capture similar negative leader behaviors. Constructs that are related to abusive supervision include *petty tyranny* (Ashforth, 1994), *supervisor aggression* (Schat, Desmarais & Kelloway, 2006), *supervisor undermining* (Duffy, Ganster, & Pagon, 2002), and *destructive leadership* (Einarsen, Aasland, & Skogstad, 2007). In addition, research on negative supervisory behaviors is embedded in research on *workplace bullying* (Zapf & Einarsen, 2001) and *victimization* (Aquino & Thau, 2008). In what follows, I provide definitions of each of these constructs and show how they are related and distinct from abusive supervision. Please see Figure 2 for a summary of the definitions of these constructs. Because research on these constructs overlaps with research on abusive supervision, I also provide a brief discussion of extant research on antecedents of these negative supervisory behaviors, as this research is related to the current study.

## Petty Tyranny

Abusive supervision overlaps with the idea of petty tyranny (Ashfort, 1994, 1997). According to Ashforth, petty tyranny occurs when a supervisor uses power “oppressively, capriciously, and...vindictively” (1997: 126). Ashforth suggests that petty tyranny includes six dimensions: arbitrariness and self-aggrandizement, belittling subordinates, lack of consideration, forcing conflict resolution, discouraging initiative, and non-contingent punishment. Similar to abusive supervision, petty tyranny includes hostile actions by those in supervisory positions. Contrary to abusive supervision, however, petty tyranny also includes behaviors by supervisors that are not necessarily hostile (Tepper, 2007), such as showing a lack of consideration (i.e., being unfriendly) or discouraging initiative (i.e., discouraging subordinates from participating in decisions).

Although research on petty tyranny is relatively limited compared to other forms of negative leader behaviors, there is research that suggests antecedents of this type of supervisory behavior. Ashforth (1997, 2003) has suggested that both situational and individual factors can contribute to petty tyranny. His work takes an interactionist perspective and posits that “behavior is a function of specific people in specific contexts” (i.e., individual characteristics interact with situational factors to foster tyranny).

Specifically, Ashforth (1997, 2003) has examined petty tyranny in relation to individual predispositions of beliefs about the organization (e.g., having a bureaucratic orientation – a willingness to comply with authority and organizational norms), beliefs about subordinates (e.g.,

Theory X orientation – the belief that the average person dislikes work, lacks ambition, avoids responsibility, and prefers to be directed), and beliefs about the self (e.g., low or high self-esteem – those with low self-esteem may compensate for their insecurities by controlling others, and those with high self-esteem may have tendencies toward vindictiveness and/or self-centered behaviors). Additionally, Ashforth has suggested that an individual’s preference for action (e.g., how dominating the individual is or how intolerant the individual is of ambiguity) can contribute to tyrannical behaviors.

In addition to these individual predispositions, Ashforth (1997, 2003) also posited that situational factors can facilitate petty tyranny. He suggested that macro-level factors of institutionalized values and norms may be related to tyrannical behavior, when they encourage overly close supervision of subordinates. For example, in mechanistic organizations where compliance with standardized tasks is emphasized, supervisors often engage in close supervision of their subordinates to ensure conformity. Also, in entrepreneurial organizations, entrepreneurs often have a strong desire for control, which may make them more likely to closely supervise their subordinates.

### Supervisor Aggression

Abusive supervision is also related to the concept of workplace aggression. Workplace aggression is a general term that includes individual behavior that is intended to harm others at work or the organization (Nauman & Baron, 1998). Unlike the constructs of abusive supervision



and petty tyranny, workplace aggression refers to aggressive behavior by individuals at any hierarchical level within the organization, not just those at supervisory levels (Tepper, 2007). In fact, most research on workplace aggression has focused on aggressive actions by lower-level employees (see Hershcovis, Turner, Barling, Arnold, Dupre, Inness, LeBlanc, & Sirvanathan, 2007, for a meta-analytic review). A few studies, however, have explicitly examined aggressive behaviors by supervisors (e.g., Grandey, Kern, & Frone, 2007; Schat et al., 2006) and have operationalized supervisor aggression with items similar to those used to assess abusive supervision (e.g., “How often does your supervisor yell at you?”).

There is considerable research on antecedents of aggressive behavior in the organizational context. Although most of this research has not examined supervisor aggression in particular, it does suggest possible antecedents of aggressive behaviors by those in supervisory positions. Similar to research on petty tyranny, research on workplace aggression has examined both situational and individual predictors of aggressive behavior. A review by Nauman and Baron (1998) demonstrated that type A behavior pattern, self-monitoring behavior, and hostile attribution bias are personality characteristics that are related to aggressive behavior.

Additionally, this review suggested that provocation, frustrating events, unfair treatment, aggressive norms, and organizational climate are situational factors that can contribute to instances of workplace aggression. Also, according to a recent meta-analysis by Hershcovis et al. (2007), commonly studied predictors of workplace aggression include the individual characteristics of trait anger, negative affectivity, and sex, and the situational characteristics of

distributive injustice, procedural injustice, interpersonal conflict, situational constraints (e.g., availability of resources), and job dissatisfaction.

### Supervisor Undermining

Duffy et al. (2002) introduced the idea of social undermining to the organizational context from research on social psychology. Duffy et al. define social undermining as “behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation” (p. 332). Similar to abusive supervision, social undermining does not include physical contact. Work on social undermining has examined this behavior perpetrated by both employees and supervisors (e.g., Duffy et al., 2002; Duffy, Shaw, Scott, & Tepper, 2006). Research on supervisor social undermining has utilized items that overlap with those used in abusive supervision research (e.g., Has your supervisor belittled you or your ideas?) and, therefore, is related to research on abusive supervision. In fact, a recent review of literature on abusive supervision suggested that supervisor undermining more closely aligns with abusive supervision than other related constructs (Tepper, 2007). It should be noted that although there has been research on the consequences of supervisor undermining (e.g., Duffy et al., 2002; Duffy et al., 2006), there has yet to be any studies on the antecedents of this behavior.

## Destructive Leadership

Destructive leadership is an emerging construct and has been defined as “behaviours by a leader...that violate the...interest of the organisation by undermining and/or sabotaging the organisation’s goals, tasks, resources, and effectiveness and/or the motivation, well-being, or job satisfaction of subordinates” (Einarsen et al., 2007). Thus, the concept of destructive leadership suggests that those who engage in this type of leadership may undermine or sabotage the well-being of their subordinates or their organization. This illustrates the difference between destructive leadership and abusive supervision. Unlike abusive supervision, the construct of destructive leadership captures negative leader behaviors directed at subordinates and those directed at the organization itself. Additionally, this construct differs from abusive supervision in that it includes both physical and verbal behaviors by the leader (Einarsen et al., 2007).

Although the construct of destructive leadership is relatively new, some researchers have examined antecedents of these leader behaviors. For example, Padilla, Hogan, and Kaiser (2007) developed a conceptual model of destructive leadership that suggests a “toxic triangle” that identifies three categories of antecedents of destructive leadership – characteristics of the leaders themselves, characteristics of susceptible followers, and characteristics of facilitative environments. The model suggests that leaders who abuse power, are charismatic, are narcissistic, have experienced negative life events, or have an ideology of hate are more likely to engage in destructive leadership. The authors further posit that destructive leadership is an interaction among leaders, followers, and environments, and as such, they suggest follower

characteristics (e.g., unmet needs, negative self-evaluations, psychological immaturity, selfishness) and situational factors (e.g., cultural values, leader discretion) moderate the relationships between destructive leader characteristics and instances of destructive leadership. Additionally, studies have examined supervisors' traits and values as antecedents of destructive leadership. Ilies and Reiter-Palmon (2008) found that leaders who valued self-enhancement (achievement and power) were more likely to engage in destructive leadership than those who valued self-transcendence (universalism and benevolence). Also, Schaubroeck, Walumbwa, Ganster, and Kepes (2007) examined the effects of "destructive leader traits" of supervisors' hostility and trait negative affectivity.

### Workplace Bullying

Workplace bullying occurs when an individual "persistently over a period of time, is on the receiving end of negative actions from one or several others, in a situation where the one at the receiving end may have difficulty defending him or herself against these actions" (Zapf & Einarsen, 2001: 369). When workplace bullying occurs, the victim is constantly teased, badgered, and insulted by the perpetrator. Thus, similar to abusive supervision, the construct of workplace bullying captures sustained exposure to hostile behaviors on the job, which are similar to those described as abusive supervisory behaviors (Tepper, 2007). However, contrary to the definition of abusive supervision, bullying includes verbal and/or physical attacks and includes

hostile actions by all organizational members, not just those perpetrated by supervisors (Tepper, 2007).

Similar to research on other forms of negative behaviors in the workplace, research on workplace bullying has examined antecedents with theoretical models that emphasize interactions of (a) characteristics of bullies and victims, (b) characteristics of interpersonal interactions in organizations, and/or (c) characteristics of the work environment (Hoel, Rayner, & Cooper, 1999). For example, a review of antecedents of workplace bullying suggested that internal competition, reward systems, restructuring, and organizational changes are aspects of the work environment that can contribute to bullying (Salin, 2003). Another review suggested that victims of bullying at work reported that their own low self-esteem, shyness, and lack of conflict management skills contributed to their becoming a victim (Einarsen, 1999).

### Victimization

Aquino and colleagues have introduced the concept of victimization to research on organizational behavior (e.g., Aquino, 2000; Aquino & Bradfield, 2000; Aquino & Byron, 2002; Aquino, Grover, Bradfield, & Allen, 1999). Victimization refers to an individual's perception of having been exposed to the aggressive behaviors of others (Aquino & Byron, 2002). Thus, workplace victimization is related to abusive supervision, in that the construct examines aggressive behaviors in the organizational context. However, the two constructs differ because

studies on workplace victimization examine aggressive behavior by all organizational members (not just supervisors) and victimization includes physical hostility (Tepper, 2007).

Most research on victimization attempts to determine factors that contribute to a person becoming the victim of a crime. The victimization literature identifies three sources of victimization: offender characteristics, victim characteristics, and situational forces (Elias, 1986). Research on workplace victimization has followed this theme and has identified situational and individual factors that contribute to hostile actions by organizational members. For example, Aquino and Bradfield (2000) found the organizational variables of job status, differences in power, and organizational culture and the victim characteristics of aggressiveness and high negative affectivity all contributed to experiences of workplace victimization. Also, Kokkinos and Panayiotou (2004) reported that offenders of aggressive actions possessed aggressive and antisocial personality characteristics.

### Summary

The constructs included in this review are related abusive supervision and deserve attention. As shown, although these constructs overlap with abusive supervision, there are conceptual differences between these constructs and abusive supervision. Thus, abusive supervision is distinct from these constructs. In the next section of this paper, I move forward and discuss the moderated mediation model. I begin to do so by first presenting research on goal-setting.

## The Unintended Consequences of Goal Setting Theory

A central tenet of goal setting theory (Locke & Latham, 1990), which has been called one of the most dominant theories in organizational behavior (Mitchell & Daniel, 2003), is the notion that goals are precursors to actions (Latham, 2007). The theory states that goals affect an individual's direction of behaviors by focusing attention only on goal-relevant behavior and influencing the intensity and persistence of effort used to attain the goal.

There are more than 1,000 studies on the effects of goal setting (Mitchell & Daniels, 2003). In many of these studies, attention has been given to the role of specific, challenging goals as opposed to vague, easy goals. The vast majority of these studies has examined outcomes, such as performance and job satisfaction, and has found that specific, difficult goals can have a positive influence on these types of positive behaviors and attitudes (Locke & Latham, 1990; Latham, Locke, & Fassin, 2002; Locke & Latham, 2002).

In addition to this research citing the benefits of specific, difficult goals, however, there has been research suggesting that goal setting may also lead to negative outcomes. Some researchers have suggested goal setting may have unintended consequences in the form of unethical behavior. Schweitzer et al. (2004) were the first to conduct an empirical study on the relationship between goal setting and unethical behavior by focusing on the link between unmet goals and ethical decision making. The authors employed a laboratory experiment in which participants were given unmet performance goals and were given the opportunity to overstate

their performance in order to obtain their goals. The study found that participants with unmet goals were more likely to lie about their performance (i.e., engage in unethical behavior) than participants simply attempting to do their best. The study also demonstrated that the relationship between goals and unethical behavior was moderated by “falling short of goals,” such that the relationship was significantly stronger when participants were just short of attaining their goals.

Following Schweitzer et al. (2004), Barsky (2008) attempted to address a number of unanswered questions in research on the goals-unethical behavior relationship, including questions regarding the mechanisms by which goals influence unethical behavior, the attributes of goals that are the strongest predictors of unethical behavior, and how individual differences moderate these relationships. To address these questions, Barsky presented a theoretical model that links attributes of goals (e.g., difficulty, specificity, content) and goal-setting practices (e.g., level of participation, rewards) to unethical behavior through two mediating mechanisms, ethical recognition and moral disengagement, which are two psychological factors that have been identified as underpinnings of ethical behavior. Barsky suggested that (a) performance goals can interfere with an individual’s ethical recognition (i.e., the awareness that an action will harm others) by directing attention toward achieving those goals and away from assessing the ethicality of behaviors, and (b) goal-setting practices, such as assigning goals and tying rewards to goal attainment, may lead to moral disengagement (i.e., the process of rationalizing behaviors; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996) by providing justifications to engage in unethical behavior.



Barsky's (2008) model was actually based on his dissertation, in which he empirically tested some of his ideas. He investigated the relationship between assigned performance goals and unethical behavior among employees (Barsky, 2004). He argued that assigning performance goals versus allowing for participation in goal setting can influence ethical recognition and moral disengagement. In a laboratory study, Barsky (2004) manipulated performance goals (no goals, assigned goals, participation), and measured ethical recognition, moral disengagement, and unethical behavior. He did not, however, find support for his predictions. Assigned goals were not significantly related to unethical behavior, and individuals in the assigned goal condition did not have a higher incidence of unethical behavior. Also, the mediating effects of ethical recognition and moral disengagement were not supported. Barsky also assessed these relationships in a field study, and obtained similar results as those for the laboratory study. Thus, neither study supported his hypotheses.

In an attempt to explain his non-significant findings, Barsky (2004) conducted post hoc analyses. His lab study included a manipulation of goal-level (easy versus difficult goals). This allowed Barsky to test the main effect of goal-level on unethical behavior and the moderating effect of goal-level on the hypothesized relationship between assigned goals and unethical behavior. These post-hoc analyses revealed (a) difficult goals were significantly related to unethical behavior and (b) difficult goals moderated the relationship between assigned goals and unethical behavior, such that the most unethical behavior occurred when goals were assigned and difficult. He suggested that these results may help to explain his non-significant findings, in that

they indicate that the relationship between assigned goal-setting and unethical behavior was influenced by goal-level (a third variable).

It should be noted that Barsky's (2004) non-significant findings may have been the result of flaws in his studies. He reported, both in his dissertation and through personal communication (A. Barsky, personal communication, May 15, 2008), that his studies included methodological limitations. For example, in the lab study, he had participants measure the mediating variables after unethical behavior was assessed (following participants' decision to act unethically), so causality may have been an issue. Also, the sample used in the field study only included 80 participants, which is a relatively small sample and may have created low power for detecting results. The results of the field study may have also been affected by his assessments of the study variables. Also, his measure of unethical behavior may have been problematic in that it was too general and subjective. It may have been better to use an objective assessment of goal-setting. Barsky's findings should be interpreted in light of the limitations.

Both Schweitzer et al. (2004) and Barsky's (2004, 2008) work on the goals-unethical behavior link suggest goal-setting may be related to unethical behavior. Participants in the lab study by Schweitzer et al. engaged in unethical behavior (i.e., lied about their performance) as a way of making it seem as though they attained their goals. Additionally, Barsky's post-hoc analyses showed evidence that an individual's level of goal difficulty influenced unethical behavior. This research suggests that goal-setting may actually create negative consequences in the form of unethical behavior.

Research on goals and unethical behavior is also related to research on goal shielding theory (Shah, Friedman, & Kruglanski, 2002). In fact, Barsky (2008) drew upon this theory to develop his model. Goal shielding theory suggests that individuals may be likely to concentrate on a single goal to the exclusion of other goals. This shielding can lead to a sole focus on goal attainment without concern for the means by which it is attained. In Barsky's model, this notion is illustrated by the mediating mechanism of ethical recognition, which may occur when employees are so focused on a goal they "forget" to consider the morality of their behavior. Additionally, research has found goal shielding is affected by both goal commitment and emotional states. Shah et al. examined the effects of goal commitment and emotions on goal shielding by conducting five studies. The authors consistently found that individuals are more likely to "goal shield" when they are highly committed to a goal because they perceive the goal to be important. Furthermore, they found goal shielding may depend on the individual's emotional state, in that feelings of anxiety increased the likelihood that an individual would engage shielding.

The notion of goal shielding is also evident in one of the main functions of goals. A central premise of goal setting theory is that goals affect an individual's actions by focusing attention on goal-relevant behavior (Locke & Latham, 1990). This function of goals can be viewed as a positive benefit, in that goals help to ensure that an individual's actions are directed toward goal attainment. However, it can also have negative consequences in the sense that non-goal-relevant actions are ignored. Thus, in relation to the current study, goal shielding theory and the notion that goals lead to a focus on goal-relevant behavior may indicate that supervisors who

are overly focused on attaining their goals may forgo non-goal-relevant behaviors, such as treating their subordinates well.

In sum, research on the link between goals and unethical behavior and research on goal shielding has suggested goal setting can contribute to “bad” behavior in the workplace. I add to this research by suggesting that goals can also contribute to an additional form of “bad” behavior, abusive supervision. Although goal shielding theory (Shah et al., 2002) and Barsky’s (2008) model shed light on the mechanisms by which goals can lead to negative behaviors, these theoretical frameworks do not specifically link goals to aggressive, or abusive behavior. Thus, instead of drawing on these models, I draw on research on stress and aggression to propose that goals can be related to abusive supervision, a form of workplace aggression. In what follows, I review research on the cognitive theory of stress to provide further support for the hypothesized model.

### The Cognitive Theory of Stress

Stress has been defined as “an individual’s psychological response to a situation in which there is something at stake and where the situation taxes or exceeds the individual’s capacity or resource” (LePine, LePine, & Jackson, 2004: p. 883). This definition is derived from Lazarus and Folkman’s (1984) cognitive theory of stress. This theory utilizes a “transactional stress perspective” as its theoretical foundation, taking into account the interaction of the individual and environment and viewing them as having a dynamic, reciprocal relationship. The

transactional model of stress posits that stress arises from cognitive judgments that situational demands exceed available resources and that these judgments depend on both the nature of the demand and the person who confronts the demand.

The cognitive theory of stress also emphasizes cognitive appraisals, or evaluations, of potential stressors. Lazarus and Folkman (1984) suggest a stressor-appraisal-emotion-outcome process. They suggest that when an individual encounters a potential stressor, he or she engages in a process of cognitive appraisal, in which the individual assesses how the stressor is related to his or her well-being. Lazarus and Folkman also posit that these cognitive appraisals lead to certain emotions, which in turn, influence an individual's subsequent behaviors and attitudes. This process is illustrated in Figure 3.

Lazarus and Folkman (1984) describe cognitive appraisals of potential stressors as a process of categorizing and evaluating the attributes of the stressor. In this process, an individual first engages in a primary appraisal and decides if and how the stressor will influence his or her well-being. The individual asks him or herself "Does the stressor cause me trouble or will I benefit from the stressor?" Then, the individual engages in a secondary appraisal and asks "What can be done to manage the situation?" These appraisals do not focus on either the individual or the environment alone. Instead, it is the result of the interaction of the individual and the environment in a certain transaction. Thus, when an individual is threatened, for example, it is a judgment limited to particular environmental conditions appraised by a particular individual.

The cognitive theory of stress also identifies how potential stressors can be categorized. Folkman and colleagues (Lazarus & Folkman, 1984; Folkman, Lazarus, Dunkel-Schetter,

DeLongis, & Gruen, 1986) suggest that primary and secondary appraisals converge to determine whether the potential stressor will have an influence on well-being. If it is determined that the stressor will affect well-being, the stressor will be appraised as either challenging (offering the opportunity for mastery or benefit) or threatening (having the possibility for harm or loss). If a stressor is considered to be challenging, it is seen as having the potential to promote personal growth or gain. On the other hand, if a stressor is perceived as threatening, it is appraised as having the potential to harm personal growth or gain (LePine, Podsakoff, & LePine, 2005).

It should be noted that in describing the difference between challenging and threatening appraisals, Lazarus and Folkman (1984) emphasize that these two appraisals are not mutually exclusive and can occur simultaneously. A job promotion, for example, brings the potential for acquiring new skills, knowledge, recognition, and financial reward, and therefore, can be seen as a challenge. At the same time, the job promotion may create a risk of being overwhelmed with a heavier workload and not performing as well as expected. In this sense, the job promotion can also be evaluated as a threat.

The cognitive theory of stress also recognizes the role of coping in the stress appraisal process. According to Lazarus and Folkman (1984), coping occurs as part of the secondary appraisal, in which an individual asks him or herself how the stressor can be managed. Coping is defined as “cognitive and behavioral efforts to manage specific...demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, p. 141). The definition of coping illustrates that it is a process concerned with what an individual exposed to a potential stressor actually thinks or does to manage the stressor. During this process various coping

options, such as altering the situation, accepting it, or seeking assistance, are evaluated (Folkman et al., 1986).

As illustrated by the definition of coping, it can involve either cognitions or behaviors (Latack & Havlovic, 1992). Cognitive coping refers to the thoughts used to manage a stressful situation, whereas behavioral coping involves physical activities used to manage the stressful situation. Strategies for coping can also depend on the focus of the coping. Problem-focused coping refers to behaviors or cognitions intended to handle the stressful situation itself. Emotion-focused coping refers to behaviors or cognitions used to deal with the emotional reactions to stressful situations (Lazarus, 1993). Coping strategies vary on these two dimensions – cognitive versus behavioral and problem-focused versus emotion-focused.

There are factors that influence the way an individual chooses to cope. Lazarus and Folkman (1984) suggest that this choice depends on available resources, such as health and energy, problem-solving skills, social skills, social support, and the existence of constraints that may hamper the use of these resources (e.g., environmental constraints, threats). Also, one critical factor in determining which coping strategy to use is the degree to which people believe that a particular strategy gives them control over the stressor (Colquitt, LePine, & Wesson, 2008).

In addition to differences in the cognitive component of these two types of stress appraisals (judgments of potential gain versus harm), Lazarus and Folkman (1984) also suggest they differ on their emotional component. Challenge stress is characterized by positive emotions, such as eagerness, exhilaration, and excitement, whereas hindrance stress is characterized by

negative emotions, such as fear, anxiety, and anger. Thus, Lazarus and Folkman suggest a sequence in which a stressor is appraised (either as a challenge or hindrance, and coping is determined), followed by emotions (either positive or negative).

As the final step in the stress process, the cognitive theory of stress also identifies outcomes of this stressor-appraisal-emotions process. Lazarus and Folkman (1984) specifically discuss adaptational outcomes (viz., functioning in work and social living, life satisfaction, and somatic health). They suggest that how individuals evaluate and cope with stressors will have an effect on their mental and physical health and quality of life. These adaptational outcomes have been referred to as strains (e.g., Schaubroeck, Cotton, & Jennings, 1989; Podsakoff, LePine, & LePine, 2007), and include states such as anxiety, tension, and exhaustion.

In the time that has passed since Lazarus and Folkman (1984) introduced the idea of the stress process, researchers in organizational behavior have extended the transactional perspective and the cognitive theory of stress to examine how stress is related to a broader scope of attitudes and behaviors. Some of this research has differentiated challenge stress from hindrance stress, and has found that these two types of stress have differential relationships with various outcomes, such as job satisfaction (e.g., Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Podsakoff et al., 2007), learning (e.g., LePine et al., 2004), and turnover (Podsakoff et al., 2007). For example, a meta-analysis by Podsakoff et al. found that challenge stress was positively related to positive outcomes, such as job satisfaction and organizational commitment, and negatively related to negative outcomes, such as turnover and withdrawal behaviors, whereas hindrance stress had opposite relationships with those outcomes.



In sum, the cognitive theory of stress indicates that when individuals are exposed to stressors, they appraise the stressors as either a challenge or hindrance. This appraisal then influences their emotions, which in turn affects their behavioral and attitudinal responses. The cognitive theory of stress also suggests that coping plays a role in the appraisal process, as it helps in managing stressful situations.

In the current study, I draw on this process to suggest that difficult goals act as workplace stressors. The appraisal of these stressors in turn, affects behavioral outcomes. I posit that hindrance stress (i.e., the appraisal of the goals) functions as the mediating mechanism between difficult goals and abusive supervision. I do this as a means of explaining the relationship between difficult goals and abusive supervision.

Because research on appraisals of stressors has found that a stressor can be considered either challenging or harmful or both (Lazarus & Folkman, 1984), I acknowledge that difficult goals may be appraised as a challenge stressor, a hindrance stressor, or both simultaneously. Therefore, I test the mediating effects of both challenge and hindrance stress in my post hoc analyses. However, the main purpose of this study was to examine situational antecedents of abusive supervision, which is a negative behavioral outcome. In line with evidence that challenge stress is related to positive outcomes (e.g., increases in job satisfaction, organizational commitment, learning) and hindrance stress is related to negative outcomes (e.g., turnover, withdrawal behaviors), I focus on hindrance stress as an antecedent of abusive supervision and as a mediator of the relationship between goal difficulty and abusive supervision.

Additionally, it should be noted that although stress research acknowledges that stress is the result of an interaction of the environment and the individual, in the current study, I only focus on situational factors as antecedents of hindrance stress. Of course, the influence of individual factors is important to examine. As part of my post hoc analyses, therefore, I examine how the mediating effect of hindrance stress is moderated by an individual difference, trait anxiety. I also mention various individual difference variables as topics for future research.

Finally, I should mention that although the cognitive theory of stress illustrates a stressor-stress appraisal-emotion-outcome sequence, my theoretical model does not examine the mediating effect of emotion. This was done for parsimony. I do acknowledge, however, that the emotion portion of the sequence is important. Thus, I examine the mediating effect of anger in my post hoc analyses. In the next section of this paper, I integrate research on goal setting, stress, and aggression to provide the rationale for my hypotheses.

## CHAPTER THREE: HYPOTHESES

### Supervisors' Goal Difficulty and Supervisors' Hindrance Stress

Difficult goals can have an impact on levels of anxiety or stress (Locke & Latham, 1990). Very few studies have empirically tested the link between goals and stress reactions (e.g., Drach-Zahavy & Erez, 2002), but those that have examined the relationship have found a positive effect. For example, White, Mitchell, and Bell (1977) conducted a laboratory experiment in which they measured perceived pressure caused by goal setting. They found that compared to having no goals, having challenging goals led to stress from greater pressure and greater chances of failure. Also, Nebeker (1987) conducted a work simulation experiment in which computer operators were given various types of goals and incentives. The study demonstrated that those who were assigned goals with difficult standards experienced higher stress than those assigned easier standards. Furthermore, in a study of individuals performing a heuristic maze task, Huber (1985) found that specific, difficult goals created excessive stress, which hampered performance.

These studies that link goals to stress have shed light on this relationship, but did not analyze the goals-stress relationship in depth. The fact that goals are related to stress is important, but what is even more necessary to our understanding of the effects of difficult goals on stress is the question of whether the resulting stress is challenge or hindrance stress. As suggested by Lazarus and Folkman's (1984) work on cognitive appraisals of stress, potential stressors, such as difficult goals, can be perceived as either challenge stressors or hindrance

stressors, or could be perceived as both simultaneously. Past research on the link between goals and stress has not made the distinction between challenge or hindrance stress.

A recent study by Drach-Zahavy and Erez (2002) is the only exception. The authors conducted a lab study in which goals (difficult goal, general goal, and strategy goal – a goal that directs attention toward developing strategies for task accomplishment), stress (high and low challenge and hindrance stress), and change (in the rules of the tasks) were varied. They hypothesized and found that participants who appraised their difficult job goals as challenging, as opposed to threatening, had higher performance and were better able to adapt to changes.

Following a logic similar to that of Drach-Zahavy and Erez (2002), I integrate the cognitive theory of stress and goal setting and examine difficult goals in relation to hindrance stress instead of examining the link between goals and stress in general. Difficult goals can be positively related to feelings of hindrance stress for three main reasons. First, difficult goals create a threat of failure, which may increase feelings of hindrance stress. Locke and Latham (1990) report goal setting introduces a potential threat, in that the mere existence of goals creates pressure to perform and the threat of failure. Difficult goals make it apparent that there are challenging standards by which performance will be evaluated and the potential for failure to meet those standards exists. The threat of failure that accompanies difficult goals can make it more likely that this type of goal will be appraised as threatening (i.e., as a hindrance stressor).

Second, difficult goals may create perceptions of an imbalance of demands and resources. As mentioned, stress arises from judgments that particular demands exceed available resources (Folkman & Lazarus, 1985). Because difficult goals create challenging demands, individuals

with this type of goal may feel they do not possess the resources (e.g., skills, abilities, time) to fulfill the demands identified by their goals. This imbalance of demands and resources can then, create a feeling that the goal can hamper their success (i.e., can increase feelings of hindrance stress).

Third, although there has not been empirical research that has explicitly linked difficult goals to hindrance stress, difficult goals have been found to be related to the negative emotions that characterize hindrance stress (e.g., fear, worry, anxiety). These emotions are referred to as “threat emotions.” For example, Folkman and Lazarus (1985) conducted a study on stress associated with taking an examination. Students were asked to indicate the extent to which they experienced various threat emotions and challenge emotions (e.g., hopefulness, eagerness, confidence). Results of the study revealed that the difficulty of the exam was a predictor of threat emotions. Findings such as these suggest that difficult goals may heighten feelings of hindrance stress.

Thus, I suggest that when supervisors are given difficult goals, they will appraise those goals as hindrance stressors, and therefore, will be likely to experience hindrance stress.

*Hypothesis 1: Supervisors’ goal difficulty will be positively related to supervisors’ hindrance stress.*

## Supervisors' Hindrance Stress and Abusive Supervision

Although research has found that hindrance stress is related to the negative outcomes mentioned above (e.g., turnover, withdrawal), to date, there are no studies that have explicitly examined the relationship between hindrance stress and abusive behavior. However, there are three reasons to suggest this relationship exists. First, a considerable amount of research has suggested that stressful events that are likely to be appraised as hindrance stressors (e.g., role conflict, role overload, role ambiguity; Colquitt et al., 2008) are triggers of aggressive behavior. A meta-analysis conducted by Herscovis et al. (2007) reported that individuals use aggression as a way of coping with stress that results from workplace stressors, in the form of situational constraints (e.g., scarcity of resources) and interpersonal conflict. Similarly, research has found that job stress from role ambiguity, role conflict, interpersonal conflict, and situational constraints is related to aggressive actions (e.g., Chen & Spector, 1992). In addition, a number of studies have reported that stressors, such as excessive workload or constraints on resources, are related to counterproductive work behaviors, which include aggression (e.g., Fox & Spector, 1999; Fox, Spector, & Miles, 2001; Spector & Fox, 2005).

The second reason to suggest hindrance stress may be related to abusive supervision is that negative emotions associated with hindrance stress have been found to be related to aggressive behavior. As mentioned, hindrance stress is characterized by negative emotions, such as fear, anger, and anxiety (Lazarus & Folkman, 1984). Research on workplace aggression has consistently found that these emotions are related to aggressive behavior. For example, the meta-

analysis by Hershcovis et al. (2007) found that anger and negative affectivity (which captures distressing emotions such as fear and anxiety) were strong predictors of workplace interpersonal aggression.

Additionally, research on deviant behavior in the workplace has suggested that “expressive” motives may underlie deviant behavior. Workplace deviance is defined as voluntary behavior by organizational members that violates organizational norms and threatens the well-being of the organization and/or its members (Robinson & Bennett, 1995, 1997) and is related to research on aggression. According to Robinson and Bennett (1997), expressive motives originate from “a need to vent, release, or express one’s feelings of outrage, anger, or frustration” (p. 18). This suggests that feelings of anger can motivate deviant behavior. Thus, when an individual experiences hindrance stress, he or she may be motivated to engage in deviant acts (e.g., abusive supervision) as a way of expressing the feelings of anger that accompany this type of negative stress.

The third reason to expect hindrance stress to be related to abusive supervision is embedded in research on coping. As mentioned, research on stress has suggested that when an individual is experiencing stress, he or she will usually cope with the stressor by engaging in cognitive or behavioral efforts and/or problem- or emotion-focused efforts. Research on coping has examined factors that influence the type of coping strategy an individual will choose to use. One factor that determines coping strategy choice is the degree to which the individual feels that a particular strategy gives them control over the stressor (Lazarus & Folkman, 1984). A problem-focused coping strategy (e.g., working harder, seeking assistance, acquiring additional resources)

is typically used when an individual believes he or she has control over the situation and has the ability to alter the situation. On the other hand, an emotion-focused coping strategy (e.g., venting anger, hostility, aggression) is used to decrease emotional discomfort when an individual feels a lack of control (Latack & Havlovic, 1992). Additionally, research has found that when an individual appraises a stressor as a hindrance as opposed to a challenge, he or she will be more likely to feel less control over the situation (Colquitt et al., 2008). This then, indicates that if a supervisor is experiencing hindrance stress, he or she will feel a lack of control and will be more likely to engage in emotion-focused coping. This coping may come in the form of abusive supervision. In other words, when supervisors are experiencing hindrance stress, they may express anger, hostility, or aggression as a way of coping with the stress they are feeling.

Taken together, these streams of research suggest hindrance stress can be an antecedent of abusive behavior. As such, I hypothesize:

*Hypothesis 2: Supervisors' hindrance stress will be positively related to abusive supervision.*

### Mediating Effects of Hindrance Stress

Given the theoretical and empirical support for the direct effect of difficult goals on hindrance stress and hindrance stress on abusive behavior, I also suggest that stress can mediate the relationship between difficult goals and abusive behavior. This mediating effect is not only supported by research on the relationships between difficult goals and stress and stress and



aggressive behavior, but is also supported by the aforementioned research on stress. This research on stress suggests that job stressors, such as difficult goals, can create feelings of stress, which can contribute to subsequent behaviors. In fact, the process of appraising a stressor is often examined as the mediating mechanism that links potential stressors to subsequent thoughts, feelings, and actions (Lazarus & Folkman, 1984). Thus, research on stress posits that stressors lead to feelings of challenge or hindrance stress, which dictates actions. Therefore, I suggest that a supervisor's difficult goals will heighten the supervisor's level of hindrance stress, which, in turn, will be translated into aggressive behavior in the form of abusive supervision.

*Hypothesis 3: Supervisors' hindrance stress will mediate the relationship between supervisors' goal difficulty and abusive supervision.*

#### Moderating Effects of Aspects of Reward Systems

In addition to examining the mediating effect of supervisors' hindrance stress on the relationship between supervisors' goal difficulty and abusive supervision, it is also important to investigate how additional situational aspects influence this mediating effect. Locke and Latham (1990) stated, "the degree of anxiety and stress experienced under a goal setting program will undoubtedly be influenced by the total context in which the goal setting process occurs" (p. 242). Thus, in this study, I also consider the moderating effects of two contextual variables, goal-contingent reward and reward interdependence.

## Supervisors' Goal-Contingent Rewards

As suggested earlier, stress is a response to demands that are perceived as something that will promote (a challenge stressor) or harm (a hindrance stressor) growth or success. In appraising stressors, the individual subjected to the stressor cognitively decides if the stressor is a challenge or hindrance. In this sense, some attributes of the potential stressor can make it more or less likely that the stressor will be perceived as challenging or threatening. One of these attributes is captured by assessments of the potential outcomes associated with the stressor (Folkman & Lazarus, 1984). In particular, the degree and type of stress an individual experiences is influenced by perceptions of what is at stake and if a threat of failure exists (Lazarus & Folkman, 1984; LePine et al., 2004). When an individual perceives that the stakes are high, stress will be likely to increase and the resulting stress will be more likely to be hindrance stress.

Perceptions that the stakes are high may exist when rewards are contingent upon goal attainment. Employee rewards and monetary incentives can come in a variety of forms including pay, promotion, raises, and recognition (Locke & Latham, 1990; Latham et al., 2002). Companies vary in the methods by which they reward their employees for their efforts. In some organizations, the distribution of rewards is based on goal attainment, with employees being rewarded with salary increases, bonuses, and promotions when they successfully attain their work-related goals. I focus on this type of reward system, which I refer to as goal-contingent rewards (when rewards are contingent upon goal attainment), as a moderator of the relationship between difficult goals and hindrance stress.

There are two main reasons to expect goal-contingent reward moderates the relationship between difficult goals and hindrance stress, both of which are based on the notions that goal-contingent rewards make it obvious that something of value is at stake and create a potential threat of failure. First, tying rewards to goal attainment can make it apparent that valued outcomes are at stake. As mentioned, stress arises in response to situations in which there is something at stake and where the situation exceeds the individual's resources (LePine et al., 2004). This suggests that if an individual is exposed to a potential stressor and what is at stake is salient, the stressor will be more likely to increase levels of stress. With goal-contingent reward, the negative consequences (or the stakes) of not attaining the goal are extremely obvious. Thus, it would be expected that goal-contingent rewards would make it apparent that something of value is at stake and would make it more likely that difficult goals would be appraised as stressful.

Second, goal-contingent rewards can increase an individual's awareness that a potential threat of failure exists. An individual involved in this type of reward system is very aware that not fulfilling the goal will result in failure to attain some type of valued outcome (e.g., compensation, promotion, bonus) and thus, may be more likely to perceive that the potential for failure exists. This may make them more likely to appraise the difficult goal as threatening as opposed to challenging.

Although the interactive effects of goal difficulty and goal-contingent reward I am suggesting have not been previously studied, the direct relationship between contingent rewards and stress has been empirically supported in research on stress reactions to pay systems. Types of

pay systems vary on a continuum of the extent to which an employee's compensation is based on individual job performance (Shirom, Westman, & Melamed, 1999). Piece-rate pay is the most performance-contingent. In this type of pay systems, employees' wages are determined solely according to individual job performance or output (e.g., commissions given to a sales person for meeting his quotas).

There are a limited number of studies that have examined the relationship between pay systems and stress. Those that have, however, have provided evidence that employees who receive piece-rate pay exhibit significantly higher levels of stress than those who do not (Shirom et al., 1999). For example, in a study of professional typists doing computer-based data entry tasks, Schleifer and colleagues (Schleifer & Amick, 1989; Schleifer & Okogaba, 1990) found that levels of anxiety were higher during periods of piece-rate pay as compared to periods without piece-rate pay. Findings such as these indicate that piece-rate pay can lead to the highest levels of stress and that an individual's stress is the highest when his or her pay is solely contingent on their performance goals.

This research on reactions to pay systems provides evidence for a direct relationship between goal-contingent rewards and stress. However, I suggest a more complicated relationship. I expect that goal-contingent rewards will moderate the relationship between supervisors' goal difficulty and supervisors' hindrance stress. Specifically, I posit that difficult goals can create higher levels of hindrance stress, and I suggest that the effect will be stronger in the existence of goal-contingent rewards. Difficult goals can be perceived as hindrance stressors,

but will be more likely to be perceived as such when rewards are contingent upon goal attainment. Hence, I hypothesize that:

*Hypothesis 4: The relationship between supervisors' goal difficulty and supervisors' hindrance stress will be moderated by the supervisors' goal-contingent rewards, such that the positive relationship between goal difficulty and hindrance stress will be stronger when the supervisors' rewards are highly contingent on goal attainment.*

### Supervisors' Reward Interdependence

There are also variables that can influence the second path of the mediation model, the hindrance stress-abusive supervision relationship. A potential moderator of this relationship is reward interdependence, which is sometimes referred to as outcome interdependence and is defined as the extent to which an individual's rewards are dependent on the performance of others (Wageman & Baker, 1997; Fan & Gruenfeld, 1998; Gully, Incalcaterra, Joshi, & Beaubien, 2002).

Reward systems with the most interdependence are those in which a work group's rewards are based on collective performance and are distributed to each member regardless of the member's own performance. On the other hand, when little reward interdependence exists, individual rewards are earned based on individual performance (e.g., commissions given to an individual salesperson). Commonly, organizations utilize reward systems that combine these two extremes, with rewards being contingent on both individual and collective performance

(Wageman & Baker, 1997). However, some organizations have reward systems, in which employees' rewards are highly contingent upon the performance of others. In this study, I examine the effects of this type of reward system.

I suggest that reward interdependence can contribute to abusive supervision by having an impact on the proposed hindrance stress-abusive supervision relationship. This assertion is based on research on strategies for coping with stress. As mentioned, individuals, who are experiencing hindrance stress, are more likely to use emotion-focused strategies (e.g., venting anger, expressing hostility; Colquitt et al., 2008). Previously, I used this notion to suggest that when supervisors experience higher levels of hindrance stress, they will be likely to engage in emotion-focused coping in the form abusive supervision as a way of managing their stress (i.e., they may express anger or hostility toward their subordinates).

Research on coping also suggests that individuals are more likely to use emotion-focused coping strategies when they feel a lack of control over the situation (Folkman & Lazarus, 1984). If an individual feels a lack of control, he or she will be more likely to feel that problem-focused strategies (e.g., working harder, acquiring additional resources) will be ineffective, because he or she will be unable to alter the situation. Instead of attempting to change the demand that originally triggered the stress, the individual will engage in emotion-focused coping strategies to decrease the emotional discomfort associated with the stress (Folkman et al., 1986; Colquitt et al., 2008). In the context of the current study, this research indicates that if a supervisor is experiencing hindrance stress, he or she may be likely to engage in abusive supervision, but this effect may be stronger when the supervisor also senses that he or she does not have control.

Reward interdependence is an attribute of a supervisor's reward system that can make supervisors feel a lack of control. Research on the effects of reward interdependence in work groups has found that this type of reward system decreases individual group member's feelings of autonomy or control over outcomes (e.g., Fan & Gruenfeld, 1998). Thus, when supervisors' rewards are contingent upon the performance of their subordinates, they may feel that they do not have control over their rewards, because the control rests in the hands of their subordinates. When supervisors feel this lack of control, they will be more likely to engage in emotion-focused coping strategies in response to the hindrance stress they are feeling. This suggests that when a supervisor is experiencing hindrance stress, he or she may abuse his or her subordinates as a way of coping, but that this effect may be stronger when the supervisor's rewards are highly contingent upon the performance of their subordinates. Hence, I hypothesize that:

*Hypothesis 5: The relationship between supervisors' hindrance stress and abusive supervision will be moderated by supervisors' reward interdependence, such that the positive relationship between hindrance stress and abusive supervision will be stronger when the supervisors' rewards are highly dependent on their subordinates' performance.*

## CHAPTER FOUR: METHODOLOGY

### Sample and Procedure

Data were collected from 257 supervisor-subordinate pairs from a variety of organizations in the southeastern United States in industries including telecommunications, finance, government, insurance, banking, food service, retail, education, and healthcare. Surveys were administered via the Internet. Responses were gathered from focal employees and the focal employees' immediate supervisors. Undergraduate students at a southeastern university served as organizational contacts and were asked to recruit a working adult (defined as working 20 hours per week or more) who was willing to serve as a focal employee. This method, often referred to as the "snowball method" (whereby organizational contacts recruit multiple sources to complete surveys) is consistent with existing approaches used within the literature (e.g., Lee & Allen, 2002; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009). A total of 640 students were asked to serve as organizational contacts. Students were given extra credit for their assistance.

Focal employees were sent e-mails that instructed them to go to secure websites to fill out their surveys and to ask their immediate supervisors to go to corresponding secure websites. To help ensure that the employee and supervisor surveys were answered by different people, the IP addresses for all respondents were examined to verify that the IP addresses were different for the focal employee and corresponding supervisor surveys. Responses were received from 319 focal employees and 282 supervisors. These responses created usable responses from 257 supervisor-



subordinate dyads for a response rate of 38.92%. A power analysis revealed a sample size of 238 is necessary for this study, so the sample size that was obtained was sufficient for data analyses.

The focal employee respondents were 51.1% male with an average age of 26.53 years and an average of 3.45 years of tenure with their organization, 2.68 years of tenure with their job, and 2.13 years of tenure with their current supervisors. The supervisor respondents were 59.2% male. The supervisors' average age was 41.23 years with an average of 10.01 years of tenure with their organization and 6.52 years of tenure with their job.

The focal employee survey contained measures of abusive supervision and demographic questions. The supervisor survey contained measures of goal difficulty, hindrance stress, goal-contingent reward, reward interdependence, and demographic questions.

I used procedures recommended by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) to minimize common method variance. Although most of my variables were assessed by the supervisor respondents, I avoided same source bias by having subordinates rate their supervisors' abusive behavior. I also ensured all respondents that there were no right or wrong answers and that their responses would remain anonymous. Respondents were also asked to answer each question as honestly as possible.

### Measures

Except as noted, responses for all items were made on a seven-point scale, ranging from 1 = "strongly disagree" to 7 = "strongly agree." All survey items are in APPENDIX A:

## SURVEY ITEMS.

### Independent Variable

*Supervisors' goal difficulty.* Supervisors' goal difficulty was assessed with three items from the Goal Setting Questionnaire (Locke & Latham, 1990). The reliability for the scale was .58. Analyses of the scale items revealed that the first item was problematic. It demonstrated a low correlation with the other items, and analyses revealed that dropping the item would increase the reliability of the scale to .72. Therefore, this item was dropped.

### Mediator Variable

*Supervisors' hindrance stress.* Supervisors' hindrance stress was measured with three items created by LePine et al. (2005). The reliability for the scale was .81.

### Moderator Variables

*Supervisors' goal-contingent reward.* Supervisors' goal-contingent reward was assessed with eight items. Four items were from the Goal Setting Questionnaire (Locke & Latham, 1990), and four items were from a measure of instrumentality adapted to the organizational context (Sanchez, Truxillo, & Bauer, 2000). The original items in the measure of instrumentality ask

participants about the instrumentality of test-taking in selection, and the items refer to “getting hired” by the organization. These items were adapted to assess the instrumentality of goal attainment, with rewards (e.g., promotion, raise, bonus) as the outcome. The reliability for the scale was .90.

*Supervisors’ reward interdependence.* Reward interdependence was assessed with four items – two items adapted from a scale developed by Campion, Medsker, and Higgs (1993) and two items adapted from a scale developed by from Allen, Sargent, and Bradley (2003). The original items in both scales assess reward interdependence among team members (i.e., the extent to which one team member’s performance is contingent on the performance of another team member). These items were adapted so that they would specifically assess the extent to which the supervisors’ rewards were contingent upon the performance of their subordinates. The reliability for the scale was .94.

#### Dependent Variable

*Abusive supervision.* Abusive supervision was assessed with Tepper’s (2000) fifteen-item abusive supervision scale. Responses for these items were made on a seven-point scale, ranging from 1 = “never” to 7 = “often.” The reliability for the scale was .96.

## CHAPTER FIVE: ANALYSES

Prior to testing my hypotheses, I examined the distinctiveness of the variables by conducting confirmatory factor analyses (CFA) with maximum likelihood estimation in LISREL 8.8 (Jöreskog & Sörbom, 2006). I tested a measurement model that consisted of five factors: the independent variable (supervisors' goal difficulty), the mediator variable (supervisors' hindrance stress), the moderator variables (supervisors' goal-contingent reward, supervisors' reward interdependence), and the dependent variable (abusive supervision). Also, although some dispute the use of mean centering to reduce multicollinearity (Echambadi & Hess, 2007), consistent with the recommendations of Cohen, Cohen, West, and Aiken (2003), I mean centered the predictor variables prior to beginning my analyses. After mean centering, variance inflation factor (VIF) scores for all of the variables were examined to determine if multicollinearity was an issue (Ryan, 1997).

I tested my hypotheses using the framework for assessing moderated-mediation models outlined by Preacher, Rucker, and Hayes (2007). There are a number of studies that examine moderation or mediation. When examining moderation, researchers attempt to identify variables that strengthen and/or change the direction of the relationship between the independent variable and dependence variable. When testing for mediation, researchers attempt to identify mechanisms by which the independent variable leads to the dependent variable (Muller, Judd, & Yzerbyt, 2005).

In addition to studying the moderating and mediating effects separately, researchers also often conduct analyses that combine moderation and mediation as I have done in the current

study. These analyses either constitute *mediated moderation* or *moderated mediation*. These terms were coined by James and Brett (1984). With mediated moderation, researchers attempt to show that the moderated variable is transmitted through the mediator variable (Baron & Kenny, 1986). On the other hand, moderated mediation models illustrate that a mediating effect is thought to be moderated by some variable (Baron & Kenny, 1986). These models attempt to explain how and when an effect occurs, and represent mediation effects that vary in strength by the value of a moderator variable (Preacher et al., 2007).

### Preacher et al.'s (2007) Framework for Testing Mediation and Moderation

Because commonly used methods for integrating moderation and mediation have methodological limitations, researchers have recently created new methods for testing mediated moderation or moderated mediation (e.g., Edwards & Lambert, 2007; Preacher et al., 2007)<sup>1</sup>. For this study, I utilized methods described by Preacher et al. Their framework extends the product of coefficients strategy<sup>2</sup> and describes how bootstrapping<sup>3</sup> can be used to estimate moderated

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<sup>1</sup> In my dissertation proposal, I proposed I would use Edwards and Lambert's (2007) framework for testing moderated mediation. However, I used Preacher et al. (2007). These two methods are similar, as they both use a combination of regression and bootstrapping to integrate moderated mediation and provide more accurate tests of moderated mediation than the commonly used methods. I used Preacher et al.'s method, because it proved to be a more straightforward method for testing moderated mediation. The article presenting their method is primarily aimed at applied researchers. Their method is intuitive and provides researchers with a clear, easy to follow method for conducting complex moderated mediation analyses.

<sup>2</sup> The product of coefficients strategy allows for a test of mediating effects and quantifies indirect effects (i.e., mediating effects) as the product of sample estimates of regression coefficients. In the product-of-coefficients tests, the product of the coefficient from the independent variable to the mediator and the coefficient from the mediator to the dependent variable adjusted for the independent variable is divided by the standard error of the product to create a test statistic. This test statistic is then tested for significance (Fritz & MacKinnon, 2007).

mediation. Preacher et al. suggest examining moderated mediation with extensions of the simple slopes method (Aiken & West, 1991) and Johnson-Neyman technique (1936). With the simple slopes method, the interactive effect of  $X$  and  $Z$  is examined to determine if the simple slope of the regression line of  $Y$  on  $X$  is significant at certain values of  $Z$ . For continuous moderator variables, these values are usually the mean and  $\pm 1$  standard deviation away from the mean. The Johnson-Neyman technique is similar to the simple slopes method. The main difference is that the technique suggests researchers should determine a region of significance (i.e., a range of values of  $Z$  for which the simple slope of  $Y$  regressed on  $X$  is significant). Preacher et al. extended both of these methods to create a method of testing moderated mediation, or what they refer to as conditional indirect effects.

Preacher et al.'s (2007) method for testing conditional indirect effects involves using bootstrapping to estimate sampling distributions of the conditional indirect effect and then using information derived from these sampling distributions to create confidence intervals for the conditional indirect effect. The sampling distribution is created through bootstrapping by estimating a mediator variable model, in which the mediator is regressed on the independent variable, the moderator variable, and the interaction term, and a dependent variable model, in which the dependent variable is regressed on the mediator, the independent variables, the moderators, and the interactions terms. The mediator and dependent variable models can be estimated in separate ordinary least square (OLS) regression equations in SPSS. Also, an SPSS

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<sup>3</sup> Bootstrapping is a resampling strategy used for hypotheses testing. With bootstrapping, the sample is considered as “a pseudo-population that represents the broader population from which the sample was derived” (Preacher et al., 2007: p.190). Sampling distributions of any statistic are generated by calculating the statistic of interest in multiple samples of the dataset.

macro can be used to generate bootstrapped confidence intervals for the conditional indirect effects.

## CHAPTER SIX: FINDINGS

### Measurement Model Results

To examine the distinctiveness of the variables, I conducted confirmatory factor analyses (CFA) with maximum likelihood estimation in LISREL 8.8 (Jöreskog & Sörbom, 2006). The measurement model consisted of five factors: the independent variable (supervisors' goal difficulty), the mediator variable (supervisors' hindrance stress), the moderator variables (supervisors' goal-contingent reward and supervisors' reward interdependence), and the dependent variable (abusive supervision). The results indicated that the five-factor model fit the data well ( $\chi^2(80) = 105.71, p < .05$ ; CFI = .99; NFI = .96; RMSEA = .04; SRMR = .04). CFI scores above .95 (Hu & Bentler, 1999) and RMSEA scores below .08 (Hoyle & Panter, 1995) indicate that the model has good fit.

I compared the five-factor model to a four-factor model ( $\chi^2(84) = 238.06, p < .001$ ; CFI = .94; NFI = .91; RMSEA = .09; SRMR = .10), a three-factor model ( $\chi^2(87) = 608.53, p < .001$ ; CFI = .80; NFI = .78; RMSEA = .16; SRMR = .12), a two-factor model ( $\chi^2(89) = 1486.90, p < .001$ ; CFI = .47; NFI = .45; RMSEA = .27; SRMR = .22), and a single-factor model ( $\chi^2(90) = 1637.25, p < .001$ ; CFI = .41; NFI = .40; RMSEA = .26; SRMR = .22). In the four-factor model, the supervisors' goal difficulty and supervisors' goal-contingent reward items were specified to load onto a single factor; in the three-factor model, the supervisors' goal difficulty, goal-contingent reward, and reward interdependence items were set to long onto a single factor; and in



the two-factor model, all of the variables measured by the supervisor (goal difficulty, goal-contingent reward, hindrance stress, and reward interdependence) were set to load onto one factor. A change in  $\chi^2$  test indicated that the five-factor model produced a significant improvement in chi-squares over the four-factor model ( $\Delta\chi^2(4) = 132.35, p < .001$ ), the three-factor model ( $\Delta\chi^2(7) = 502.82, p < .001$ ), the two-factor model ( $\Delta\chi^2(9) = 1381.19, p < .001$ ), and the single-factor model ( $\Delta\chi^2(10) = 1531.54, p < .001$ ).

### Descriptive Statistics and Correlations

The means, standard deviations, and intercorrelations among the variables are presented in Table 1.

### Results of Tests of the Hypotheses

Before testing my hypothesized model, I mean centered the predictor variables and examined variance inflation factor scores to determine if multicollinearity was a problem (Cohen et al., 2003). Variance inflation factor scores were all below the standard of 10.0 (Ryan, 1997), which suggests that multicollinearity was not an issue.

To test my moderated mediation model, I used the SPSS macro created by Preacher et al. (2007) to run OLS regression equations to estimate the mediator variable and the dependent variable models. The mediator model was a regression equation that predicted the mediator

(supervisors' hindrance stress) from the independent variable (supervisors' goal difficulty), the first moderator (supervisors' goal-contingent reward), and the interaction term. The dependent variable model was a regression model that predicted the dependent variable (abusive supervision) from the mediator (supervisors' hindrance stress), the independent variable (supervisors' goal difficulty), the moderators (supervisors' goal-contingent reward and supervisors' reward interdependence), and the interactions between the first moderator and the independent variable and the second moderator and the mediator. The results of these analyses are presented in Table 2 and 3.

Hypothesis 1 suggested that supervisors' goal difficulty would be positively related to supervisors' hindrance stress. Consistent with my expectations, the results revealed that supervisors' goal difficulty was positively and significantly related to supervisors' hindrance stress ( $\beta = .41, p < .001$ ). Hypothesis 2 proposed that supervisors' hindrance stress would be positively related to abusive supervision. The results demonstrated that supervisors' hindrance stress was positively and marginally significantly related to abusive supervision ( $\beta = .09, p < .10$ ). These results provide support for mediation and thus, support Hypothesis 3, which suggests supervisors' hindrance stress mediates the relationship between supervisors' goal difficulty and abusive supervision.

To further examine these mediating hypotheses and to test to see if the mediation was full or partial, I followed procedures recommended by Baron and Kenny (1986), which were described earlier. According to Baron and Kenny, four conditions must be met to establish mediation: (a) the independent variable must be significantly related to the mediator; (b) the

independent variable must be significantly related to the dependent variable; (c) the mediator and the dependent variable must be significantly related; and (d) when the mediator variable is included in the regression equation, the relationship between the independent variable and dependent variable should be weaker or nonsignificant.

First, the results revealed that supervisors' goal difficulty was positively and significantly related to supervisors' hindrance stress ( $\beta = .40, p < .05$ ). This finding satisfies the first condition described by Baron and Kenny (1986) and shows support for Hypothesis 1. Second, the results demonstrated that supervisors' goal difficulty was positively and significantly related to abusive supervision ( $\beta = .17, p < .05$ ), which satisfies Baron and Kenny's second condition. Third, the results revealed that supervisors' hindrance stress was positively and significantly related to abusive supervision ( $\beta = .10, p < .05$ ), which satisfies the third condition and supports Hypothesis 2. Finally, the results showed that the relationship between supervisors' goal difficulty and abusive supervision weakened when the mediator, supervisors' hindrance stress, was included in the regression equation. The beta coefficients decreased from .17 to .14. Because the relationship between supervisors' goal difficulty and abusive supervision remained significant, the results provide support for partial mediation. These results should be interpreted in light of the limitations of Baron and Kenny, which were described earlier.

I also used Sobel's (1982) test for indirect effects to further examine the mediating effect (MacKinnon, Lockwood, Hoffman, West, & Sheet, 2002). Results of this test demonstrated that the intervening effect of supervisors' hindrance stress for supervisors' goal difficulty was significant ( $Z = 1.97; p < .05$ ).

I also empirically tested the mediating effect of supervisor's hindrance stress with structural equation modeling (SEM) in LISREL 8.8 (Jöreskog & Sörbom, 2006). I tested and compared the fully mediated model to the partially mediated model. The fully mediated model fit the data well ( $\chi^2(18) = 19.93, p = .34$ ; CFI = 1.00; NFI = .98; RMSEA = .03; SRMR = .05). I compared the fit of this fully mediated model with that of the partially mediated model. The partially mediated model also fit the data well ( $\chi^2(17) = 15.61, p = .55$ ; CFI = 1.00; NFI = .99; RMSEA = .00; SRMR = .03). A change in  $\chi^2$  test indicated that the partially mediated model represented a significantly better fit than the fully mediated model ( $\Delta\chi^2(1) = 4.32, p < .05$ ). It should be noted that in the partially mediated model,  $p < .10$  was obtained with respect to the second path of the mediation. The fully and partially mediated models are shown in Figure 4 and 5.

These results were consistent with the findings from the regression analyses reported above and provide support for Hypotheses 1, 2, and 3. SEM was used to further test the mediating effect. However, the use of SEM to test this model can be called into question. The use of latent variables with only two indicators in SEM, as is the case with goal difficulty, may be problematic. Using only two indicators may increase the chance of having an "empirically underidentified" model and may create nonconvergence of the model (Klein, 1998). However, the model converged, so it was assumed that having two indicators was not an issue.

In sum, the full test of moderated mediation using Preacher et al.'s (2007) framework, the regression analysis using Baron and Kenny's (1986) causal steps approach, and the results of SEM provided support for Hypotheses 1, 2, and 3. Results of these analyses revealed that

supervisors' hindrance stress partially mediated the relationship between supervisors' goal difficulty and abusive supervision.

Hypothesis 4 posited that supervisors' goal-contingent reward would moderate the relationship between supervisors' goal difficulty and supervisors' hindrance stress, such that the relationship would be stronger when supervisors' goal-contingent reward is high. Results of the moderated mediation analyses (Preacher et al., 2007) revealed that supervisors' goal-contingent reward did not significantly moderate the relationship between supervisors' goal difficulty and supervisors' hindrance stress ( $\beta = -.07, ns$ ). To further test the interactive effects of supervisors' goal difficulty and supervisors' goal-contingent reward, I also used regression. The results were consistent with the findings from the test for moderated mediation, and demonstrated that supervisors' goal-contingent reward did not significantly moderate the relationship between supervisors' goal difficulty and supervisors' hindrance stress ( $\beta = -.01, ns$ ).

Hypothesis 5 proposed that supervisors' reward interdependence would moderate the relationship between supervisors' hindrance stress and abusive supervision, such that the relationship would be stronger when supervisors' reward interdependence was high. Results of the moderated mediation analyses revealed that supervisors' reward interdependence did not significantly moderate the relationship between supervisors' hindrance stress and abusive supervision ( $\beta = .02, ns$ ). I also used a regression equation to test this hypothesis and found consistent results. The results demonstrated that supervisors' reward interdependence did not significantly moderate the relationship between supervisors' hindrance stress and abusive supervision ( $\beta = .01, ns$ ).

### Post Hoc Analyses

To further examine the relationship between supervisors' difficult goals and abusive supervision, I conducted post hoc analyses. First, I examined the moderating effects of reward interdependence on the relationship between goal difficulty and hindrance stress. Second, I examined a supervisor personality characteristic, trait anxiety, as a moderator of the relationship between goal difficulty and hindrance stress. Third, I tested a structural equation model that included both challenge and hindrance stress as mediators of the relationship between goal difficulty and abusive supervision. Finally, I tested a structural equation model that more fully examined the link between goals and abusive supervision by examining the role of anger in the stressor-stress-outcome process. A brief explanation of my rationale for studying these relationships and the results of these analyses are presented below.

#### *Supervisors' reward interdependence as a moderator of the first path of the mediation.*

As part of the cognitive theory of stress, Lazarus and Folkman (1984) propose that it is important to examine attributes of situations that make stressors likely to be perceived as challenging or threatening. One factor that can influence how a stressor is appraised is control. Research has suggested that situations that are perceived as uncertain or unpredictable are more likely to be perceived as threatening (e.g., Fiske, Morling, & Stevens, 1996; Shiloh, Berkenstadt, Meiran, Bat-Miriam-Katzel, & Goldman, 1997).

In my rationale for Hypothesis 3, I proposed that reward interdependence is a proxy for control, in that supervisors' who have more reward interdependence with their subordinates will feel less control over whether or not they receive their rewards. Given this suggestion, it is possible that supervisors' reward interdependence may actually have an influence on how difficult goals (the stressors) are perceived (whether they are appraised as hindrance stressors). If high reward interdependence equates to feelings of a lack of control, reward interdependence may be an attribute of the situation that may make difficult goals more likely to be perceived as threatening. Thus, I examined reward interdependence as a moderator of the relationship between supervisors' goal difficulty and supervisors' hindrance stress. This rationale suggests that high reward interdependence will strengthen the relationship between supervisors' goal difficulty and supervisors' hindrance stress.

To test a moderated mediation model that examined the mediating effect of supervisors' hindrance stress on the relationship between supervisors' goal difficulty and abusive supervision with supervisors' reward interdependence moderating the goal-stress relationship, I used the SPSS macro created by Preacher et al. (2007). The mediator model was a regression equation that predicted supervisors' hindrance stress from supervisors' goal difficulty, supervisors' reward interdependence, and the interaction term. The dependent variable model was a regression model that predicted abusive supervision from supervisors' hindrance stress, supervisors' goal difficulty, supervisors' reward interdependence, and the interaction term. Results provided support for this moderated mediation model. The results are shown in Table 4 and 5.

I also used regression to test the interactive effects of supervisors' goal difficulty and supervisors' reward interdependence. The results were consistent with the findings from the test for moderated mediation and revealed that supervisors' reward interdependence significantly moderated the relationship between supervisors' goal difficulty and supervisors' hindrance stress ( $\beta = .11, p < .001$ ). This relationship is shown in Figure 6. To further examine the nature of this interaction, I conducted a simple slopes analysis (Aiken & West, 1991). The analysis demonstrated that the simple slope of supervisors' hindrance stress onto supervisors' goal difficulty with high supervisors' reward interdependence was significant ( $t = 3.87, p < .05$ ), and the slope of supervisors' hindrance stress on supervisors' goal difficulty with low supervisors' reward interdependence was also significant ( $t = 4.58, p < .05$ ).

These results indicate that reward interdependence plays a role in stress appraisals of difficult goals. Certain contextual attributes can make it more or less likely that a potential stressor will be perceived as a challenge or hindrance. The results of these post hoc analyses indicate that reward interdependence may be one attribute of reward systems that may influence whether or not difficult goals are appraised as hindrance stressors. Future research should continue to examine this effect.

*Supervisors' trait anxiety as a moderator of the first path of the mediation.* As mentioned, research on stress takes a transactional perspective and emphasizes the importance of examining the "transaction" between the individual and the environment (Lazarus & Folkman, 1984). To address this transactional perspective of stress, I tested a moderated mediation model that examined supervisors' hindrance stress as a mediator of the goals-abusive supervision



relationship and supervisors' trait anxiety as a moderator of the relationship between difficult goals and hindrance stress. My rationale was that supervisors' goal difficulty might interact with this individual difference variable, such that the goal-stress relationship would be stronger for those supervisors who scored higher on a measure of trait anxiety. I suspected that those who scored higher on a measure of trait anxiety would be more likely to perceive difficult goals as hindrance stressors.

The measures for goal difficulty, hindrance stress, and abusive supervision that were used were the same as those used in the current study. Supervisors' trait anxiety was measured with five items created by Spielberger (1983). The reliability for the scale was .89. These items are in APPENDIX A: SURVEY ITEMS.

I used the SPSS macro created by Preacher et al. (2007) to test this moderated mediation model. The mediator model was a regression equation that predicted supervisors' hindrance stress from supervisors' goal difficulty, supervisors' trait anxiety, and the interaction term. The dependent variable model was a regression model that predicted abusive supervision from supervisors' hindrance stress, supervisors' goal difficulty, supervisors' trait anxiety, and the interaction term. Results provided support for the moderating effect of supervisors' trait anxiety, but did not provide support for the entire moderated mediation model. The results of the dependent model revealed that the relationship between supervisors' hindrance stress and abusive supervision was not significant. The results are shown in Table 6 and 7.

To further test the interactive effects of supervisors' goal difficulty and supervisors' trait anxiety, I also used regression. The results demonstrated that supervisors' reward

interdependence significantly moderated the relationship between supervisors' goal difficulty and supervisors' hindrance stress ( $\beta = .11, p < .001$ ). This relationship is shown in Figure 7. I also conducted a simple slopes analysis to examine this interaction. The analysis revealed that the simple slope of supervisors' hindrance stress onto supervisors' goal difficulty with high supervisors' trait anxiety was significant ( $t = 2.95, p < .05$ ), and the slope of supervisors' hindrance stress on supervisors' goal difficulty with low supervisors' trait anxiety was significant ( $t = 3.64, p < .05$ ).

Although the results did not support the moderated mediation model, the finding that trait anxiety moderated the relationship between supervisors' goal difficulty and hindrance stress is important, in that it suggests that those who are higher on trait anxiety may be more likely to appraise difficult goals as hindrance stressors. These results suggest that individual difference variables have an influence on how potential stressors are perceived. The effect of trait anxiety on the relationship between difficult goals and hindrance stress, as well as the influence of additional individual difference variables, should be examined in future research.

*Supervisors' challenge stress and hindrance stress as mediators.* In describing the difference between challenge and hindrance stress, Lazarus and Folkman (1984) emphasize that these two stress appraisals are not mutually exclusive and can occur simultaneously. Thus, it seems reasonable that both supervisors' challenge stress and hindrance stress can act as mediators of the relationship between supervisors' goal difficulty and abusive supervision. Therefore, I tested a theoretical model that examined the mediating effect of supervisors' challenge stress and hindrance stress on the relationship between supervisors' goal difficulty and

abusive supervision simultaneously. Because research on stress suggests that stressors can be appraised as a challenge and hindrance stressors simultaneously, I expected goal difficulty to be positively related to both types of stress. Also, research on the differential effects of these types of stress has suggested that challenge stress is positively related to positive outcomes, whereas hindrance stress is positively related to negative outcomes (e.g., Podsakoff et al., 2007). Thus, I expected challenge stress to be negatively related to abusive supervision and hindrance stress to be positively related to abusive supervision.

The measures for goal difficulty, hindrance stress, and abusive supervision that were used were the same as those used in the current study. Challenge stress was measured with three items created by LePine et al. (2005). The reliability for the scale was .91. These items are in APPENDIX A: SURVEY ITEMS.

Structural equation modeling revealed that both supervisors' hindrance stress and supervisors' challenge stress mediated the relationship between supervisors' goal difficulty and abusive supervision ( $\chi^2(40) = 57.31, p < .05$ ; CFI = .99; NFI = .97; RMSEA = .04; SRMR = .04). This model is shown in Figure 8. As you can see from Figure 8, goal difficulty had differential relationships with challenge stress and hindrance stress. Contrary to my expectations, goal difficulty was negatively related to challenge stress and positively related to hindrance stress. However, in line with my predictions, challenge stress was negatively related to abusive supervision and hindrance stress was positively related abusive supervision. I compared the fully mediated model to the partially mediated model, but in the partially mediated model, the path

from difficult goals to abusive supervision, the path from challenge stress to abusive supervision, and the path from hindrance stress to abusive supervision were all non-significant.

These findings are interesting on two fronts. First, they suggest that when goals are perceived as difficult, they will be appraised as a hindrance stressor and not as a challenge stressor. Second, the results support research demonstrating that challenge stress and hindrance stress have differential effects on outcomes by showing that challenge stress was negatively related to abusive supervision and hindrance stress was positively related. Future research should examine the link between goal difficulty and these two types of stress, as well as the effects of these types of stress on abusive supervision.

*Supervisors' hindrance stress and supervisors' anger as mediators.* Although research on stress acknowledges the role of emotions in the stress process (Lazarus & Folkman, 1984), the current study did not take emotional reactions into account. The stressor-emotion model of counterproductive behavior (Spector & Fox, 2005) is based on the cognitive theory of stress (Lazarus & Folkman, 1984) and suggests that workplace stressors lead to an appraisal of the stressor, which leads to negative emotions and eventuates in counterproductive behavior. Basically, this model adapts the work of Lazarus and Folkman to suggest a stressor-stress appraisal-emotion-behavior sequence that specifically examines counterproductive behavior as the behavioral outcome. I drew on this model to test a theoretical model that suggested supervisors' goal difficulty was positively related to supervisors' hindrance stress, which was positively related to supervisors' anger, which in turn was positively related to abusive supervision.

The measures for goal difficulty, hindrance stress, and abusive supervision that were used were the same as those used in the current study. Supervisors' anger was measured with two items adapted from a measure of perceived contract violation (Robinson & Morrison, 2000). The original items assessed feelings of anger toward the organization. I adapted the items to assess anger toward the supervisor. The reliability for the scale was .88. These items are in APPENDIX A: SURVEY ITEMS.

Structural equation modeling revealed that supervisors' hindrance stress mediated the relationship between supervisors' goal difficulty and supervisors' anger and supervisors' anger mediated the relationship between supervisors' hindrance stress and abusive supervision ( $\chi^2(32) = 39.66, p = .17; CFI = .98; NFI = 1.00; RMSEA = .03; SRMR = .06$ ). This model is shown in Figure 9. As you can see from Figure 9, the variables were related as I expected. I compared this fully mediated model to a partially mediated model that included a path from goal difficulty to abusive supervision. The results of this analysis revealed that in the partially mediated model, the path from goal difficulty to abusive supervision was not significant.

These findings show support for the stressor-stress-emotion-outcome sequence proposed by the cognitive theory of stress and provide support for the stressor-emotion model of counterproductive behavior. More importantly, these results help to further explain why difficult goals act as stressors that influence subsequent "bad" behavior, which is a complicated process that should be explored.

## CHAPTER SEVEN: DISCUSSION

Research on abusive supervision has focused on the negative consequences of abusive supervisory behaviors (e.g., Tepper, 2000; Tepper et al., 2001; Mitchell & Ambrose, 2007; Tepper et al., 2007). However, there is limited extant research on the antecedents of this type of behavior. The current study adds to research on antecedents of abusive supervision by examining situational factors. Specifically, the study investigated the mediating effect of supervisors' hindrance stress in the relationship between supervisors' difficult goals and abusive supervision. It also examined the influence of two moderators – goal-contingent reward and reward interdependence – on this mediating effect. The results of the study revealed that supervisors' hindrance stress partially mediated the difficult goals-abusive supervision relationship, but this mediating effect was not moderated by either goal-contingent reward or reward interdependence. Below I discuss these findings in more detail, comment on post hoc analyses that were conducted, discuss the implications of these findings for researchers and managers, and mention avenues for future research.

This study integrates research on goal setting, stress, and aggressive behavior and provides empirical evidence that when supervisors are given difficult goals, these goals increase levels of hindrance stress, which in turn contributes to abusive supervision. These findings are important in that they theoretically and empirically contribute to the limited research on the factors that are associated with abusive supervision.

The study also revealed some unexpected findings. First, goal-contingent reward did not moderate the relationship between supervisors' goal difficulty and hindrance stress. I

hypothesized that the relationship between goal difficulty and hindrance stress would be stronger when goal-contingent reward was high. I argued that the existence of goal-contingent rewards would make it evident that there was something of value at stake and that the threat of failure exists, which in turn, would make it more likely that a difficult goal would be perceived as a hindrance stressor. The results, however, suggest that goal-contingent reward does not have this effect.

This finding may be the result of the significant correlation between goal difficulty and goal-contingent rewards. It is well-known that it is difficult to detect moderator effects (Shieh, 2008). This is especially true when the independent and moderator variables are correlated, which can create multicollinearity (Aguinis, 1995). In the current study, the independent variable, goal difficult, and the first moderator, goal-contingent reward are significantly correlated at  $-.18$ . This correlation may have made it difficult to detect an interactive effect of these two variables.

It may also be that there is some overlap in the conceptual definitions of the two constructs. Confirmatory factor analyses revealed these constructs are empirically distinct, but perhaps the survey items were not conceptually distinct in the minds of respondents. The items used for goal difficulty and goal-contingent reward all ask about job goals. It is possible, for example, when supervisors responded to the goal difficulty item that stated “my goals are too difficult,” they were automatically, or subconsciously, thinking of the difficulty of their goals in terms of the rewards that were contingent upon attaining their goals. Moreover, the negative correlation between these two variables indicates that supervisors with higher goal-contingent

reward were less likely to rate their goals as high on difficulty. The reasons for this correlation are unclear, but this correlation may give some insight into why goal-contingent reward did not moderate the goal difficulty-hindrane stress relationship. Future research should further examine these unexpected findings.

Second, reward interdependence did not moderate the relationship between supervisors' hindrance stress and abusive supervision. I expected that reward interdependence would moderate the relationship between hindrance stress and abusive supervision, such that the relationship would be stronger when reward interdependence was high. I argued that when supervisors had high reward interdependence, they would feel less control, which would make them more likely to engage in emotion-focused coping (e.g., venting anger) as a means of coping with the stress they are experiencing. However, the results of the study revealed this was not the case.

The non-significant findings for the moderating effects of reward interdependence may indicate that the moderating effect is more complex than I suggested. It could be argued that when supervisors have high reward interdependence, they do feel a lack of control, but they may also be very aware that their rewards are contingent upon their subordinates' performance. This awareness may actually make supervisors less likely to abuse their subordinates, because they may feel the need to supervise in a more considerate, fair, or nurturing manner to motivate their subordinates to work harder. Thus, two arguments for the moderating effects of reward interdependence can be made – one that suggests high reward interdependence will strengthen



the relationship between stress and abuse and another that suggests high reward interdependence will weaken the relationship.

These conflicting arguments suggest that the effects of reward interdependence may be more complex than I proposed. It may be possible that a three-way interaction is actually occurring. For some supervisors high reward interdependence makes the relationship between stress and abuse stronger, while for others high reward interdependence weakens the relationship. This then, suggests characteristics of supervisors that could create these differences in the effects of reward interdependence should be examined as moderators. Supervisors' characteristics that may have this effect can be drawn from research on antecedents of aggressive supervisory behavior and may include more aggressive characteristics (e.g., trait anger; Hershcovis et al., 2007; hostile attribution bias; Hoobler & Brass, 2006) or beliefs about appropriate ways to supervise others (e.g., Theory X orientation; Ashforth, 1997, 2003; authoritarianism; Aryee et al., 2007). Of course, this explanation for this unexpected finding is speculative. Future research should examine the possibility of three-way interactions.

### Theoretical Implications

The current study makes theoretical contributions to research on goal setting, stress, and abusive supervision. The findings of this study contribute to goal setting research. Most research on goal setting has examined the effects of attributes of goals and goal setting practices on positive outcomes. Only a few studies have examined negative outcomes, and those that have

examined only unethical behavior (e.g., Schweitzer et al., 2004; Barsky, 2008). The current study adds to this limited research on the possible negative outcomes of goal setting by examining the relationship between difficult goals and abusive supervision. The findings of this study do not dispute empirical research that suggests goal setting is beneficial in organizations, but the study does suggest that goal setting may also contribute to “bad” behavior in organizations. Thus, for example, supervisors with difficult goals may very well have higher performance, but the current study indicates that those supervisors may also be abusing their subordinates.

Additionally, this study examines the relationship between difficult goals and hindrance stress, which is a relationship that has yet to be extensively examined. Some studies have examined the link between goals and stress (e.g., Nebeker, 1987; Huber, 1985), but these studies have not investigated how goals are related to challenge stress or hindrance stress, in particular. The aforementioned study by Drach-Zahavy and Erez (2002) is the only exception. Similar to Drach-Zahavy and Erez (2002), the current study examines hindrance stress as an outcome of difficult goals. Future research should continue to examine the effects of difficult goals on both challenge and hindrance stress.

This study also adds to research on stress by examining how hindrance stress, in particular, mediates the relationship between difficult goals and abusive supervision. As mentioned, research on stress suggests a sequence in which stressors lead to an appraisal process (hindrance or challenge stress), which in turn leads to outcomes. The current study empirically examines this sequence and finds that difficult goals are stressors that can lead to feelings of hindrance stress, which can lead to abusive supervision. This study also adds to research on

stress by investigating the relationship between hindrance stress and abusive supervision, which is an outcome of stress that has yet to be examined. Research on the differential effects of challenge and hindrance stress has examined both positive and negative outcomes of these types of stress, but has not examined abusive supervision as an outcome.

Finally, this study contributes to the limited research on antecedents of abusive supervision. The main purpose of the study was to examine contextual antecedents of abusive supervision. Difficult goals and hindrance stress were found to be antecedents of abusive supervision, and the relationship between difficult goals and abuse was partially explained by the mediating effect of hindrance stress. This study adds to research that has linked situational factors (e.g., organizational injustice, psychological contract violation) to abusive supervision, and suggests that difficult goals can be an additional situational antecedent of abusive supervision. The study also partially explained this link through the mediating effect of supervisors' hindrance stress. Future research should continue to examine contextual and individual factors that can contribute to abusive supervision.

### Practical Implications

This study illustrates factors that can contribute to abusive supervisory behaviors. Abusive supervision is extremely costly to organizations (Tepper et al., 2006). An understanding of the factors that are associated with abusive supervision can help organizations deter these types of detrimental supervisory behaviors. Hence, the findings of this study have important

implications for organizations, in terms of combating abusive supervision. First, the study brings to light the fact that abusive supervision can be a potential negative consequence of goal setting. Because goal setting has been found to be so beneficial, many organizations utilize goal setting practices. The findings of this study suggest that organizations using goal setting need to be cognizant of the potential “pitfalls” of giving organizational members difficult goals (Latham & Locke, 2006). It may be that these difficult goals contribute to positive outcomes, such as increases in performance and productivity, but the current study suggests these goals may also contribute to negative behaviors in organizations in the form of abusive supervision.

Second, the study draws attention to the fact that a supervisor’s feelings of hindrance stress can contribute to abusive supervision. In determining an individual’s ability to appropriately and effectively manage employees, organizations need to be aware of the levels of hindrance stress supervisors are feeling. This study demonstrates that both the antecedents and consequences of hindrance stress are important. Higher levels of hindrance stress were found to contribute to negative behaviors in the workplace, and difficult goals were found to be related to higher levels of hindrance stress. Organizations should be aware of these relationships.

### Limitations

As with most studies, this study is not without limitations. First, some of the data may suffer from common method variance and same source bias (Podsakoff et al., 2003). I collected data from both supervisors and subordinates, but four of the five variables were assessed from

the supervisors' perspective. This may indicate that some of the data suffer from same source bias. Also, all of the data were collected via surveys, so the data may suffer from common method variance.

Second, the data are cross-sectional, so causality cannot be inferred. Although my conceptualization of the relationships of interest is consistent with research linking stressors to subsequent behavior, other causal explanations for these relationships may exist. For example, my theoretical model suggests that difficult goals create higher levels of hindrance stress. It is possible however, that the opposite may be true – that when an individual is experiencing hindrance stress, goals will be perceived as more difficult and overwhelming because of the negative state of mind associated with hindrance stress. Future research should consider examining these relationships in a laboratory study to provide evidence of the hypothesized causal relationships.

Third, the study did not take into account the role of emotions in the stressor-outcome link. I drew on theories of stress to suggest a mediating process in which difficult goals can be perceived as hindrance stressors, which can contribute to abusive supervision. However, theories of stress posit that emotions act as a more proximal outcome to stress than subsequent behavior. These theories suggest that (a) potential stressors spark an appraisal process during which the stressor is appraised as challenging or threatening, (b) this appraisal process creates an emotional response, and (c) this emotional response then influences subsequent behavior. For simplicity, the current study only assessed and tested three of these four steps in the sequence by examining how stressors lead to an appraisal of the stressor, which in turn, leads to behavior. Emotional

responses were not investigated. Future research should examine this additional step in the process that links difficult goals to abusive supervision.

Fourth, in this study, I did not explicitly examine coping strategies. In suggesting the relationship between stress and abusive supervision and the moderating effects of reward interdependence, I drew from research on coping strategies. I suggested that abusive supervision may actually be used as an emotion-focused coping strategy and may be a means of coping with hindrance stress from difficult goals. However, I did not explicitly assess if this was the case. Future research should examine whether abusive supervision is considered by supervisors to be an emotion-focused coping strategy.

Fifth, although theories of stress take a transactional perspective and emphasize the importance of examining the interaction between the individual and the environment (Lazarus & Folkman, 1984), the current study did not address the role of the individual in the relationship between goals and abusive supervision. A primary purpose of this study was to examine contextual antecedents of abusive supervision. Thus, contextual variables were examined, and individual difference variables were excluded from the study. The examination of individual differences is important in determining how individual characteristics affect appraisals of difficult goals, levels of hindrance, and abusive supervision. This interaction of aspects of goals and reward systems and individual difference variables should be studied in future research.

Finally, the post hoc analyses, in which I tested a model with challenge stress and hindrance stress as mediators, may indicate that my measure of goal difficulty was problematic. The fact that difficult goals were negatively related to challenge stress may indicate that the

measure of goal difficulty that was used actually assessed overwhelming goals as opposed to merely difficult goals. Difficult goals have been found to lead to higher performance, but only as long as the goal does not exceed the limits of the individual's knowledge, skills, and abilities (Locke & Latham, 1990). If goals are too difficult, or impossible to accomplish, the positive effects of difficult goals disappear. Items such as "my goals are too difficult" may not capture difficult goals, but instead may assess unattainable goals. If this was the case, the finding that difficult goals were negatively related to challenge stress becomes clear. It would make sense that these exceedingly difficult goals would only be perceived as threatening and thus, would only create hindrance stress. The distinction between the effects of merely difficult and exceedingly difficult goals should be examined in future research.

### Future Research

The current study brings to light a number of avenues for future research. First, the relationship between difficult goals and abusive supervision should be further examined. Much research on goal setting suggests that difficult goals can lead to positive outcomes, such as higher performance and job satisfaction. The current study does not dispute these findings, but it does provide evidence that difficult goals can also lead to negative outcomes. The next plausible step in the examination of difficult goals and negative outcomes, then, is investigations of the conditions under which difficult goals are more or less likely to lead to negative outcomes (e.g., abusive supervision, unethical behavior, counterproductive behavior). Contextual factors that

may affect the relationship between goals and negative outcomes include organizational norms of aggression (e.g., Tepper, Henle, Lambert, Giacalone, & Duffy, 2008) or competition among organizational members (Latham & Locke, 2006). Also, individual difference variables that are commonly associated with aggressive behavior could influence the goals-negative outcomes relationship, such as trait anger (e.g., Hershcovis et al., 2007), hostile attribution bias (e.g., Hoobler & Brass, 2006), and negative reciprocity beliefs (e.g., Mitchell & Ambrose, 2007). In addition, the moderating effects of attributes of the difficult goals themselves should be examined (e.g., goal commitment, participation in goal setting, number of goals).

Second, future research should continue to examine the link between difficult goals and stress. To examine this effect more fully, researchers should investigate how difficult goals are differentially related to both challenge and hindrance stress. Examining this link between difficult goals and the different types of stress will assist in our understanding of why difficult goals have been found to be related to both positive and negative outcomes. Perhaps, goals lead to positive outcomes when they are perceived as challenge stressors, but lead to negative outcomes when perceived as hindrance stressors.

Additionally, future research should address the factors that contribute to perceptions of difficult goals as a challenge or hindrance. Inherent in the transactional stress model is the idea that situational and individual factors interact and influence the way a stressor is appraised. Thus, future research on the link between difficult goals and stress should take into account the role of characteristics of the individual in appraising goals as stressors. An examination of the interactive effects of difficult goals and individual characteristics could further our understanding



of why goals can be perceived as challenge stressors by some and hindrance stressors by others. Some individual characteristics that should be examined are embedded in research on stress and include self-esteem, locus of control, and negative affectivity (e.g., Folkman & Lazarus, 1984).

Finally, additional mediators of the relationship between difficult goals and abusive supervision should be examined. The current study examined hindrance stress as the explanatory mechanism linking difficult goals to abusive supervision. However, hindrance stress was found to only partially mediate the goals-abuse relationship. Thus, additional explanations for this relationship may exist. As such, future research should attempt to explain the relationship between goals and abusive supervision by examining additional mediators. Barsky's (2008) work on the link between attributes and goals and goal-setting practices and unethical behavior sheds light on possible mediators of moral disengagement and ethical recognition. Also, Latham and Locke (2006) suggest that goal setting can have negative consequences if the goals, or possibility of not attaining the goal, threaten the individual's self-esteem. Thus, threats to self-esteem may be a mediator of the relationship between goals and abusive supervision.

### Conclusion

There is a need to understand factors that may contribute to a supervisor's abusive behavior. This study suggests that hindrance stress partially mediates the relationship between difficult goals and abusive supervision. The current study is the first to examine these relationships, and by doing so, makes theoretical contributions to research on goal setting, stress,

and abusive supervision. In all, this study demonstrates (a) possible negative consequences of difficult goals, (b) the mediating effect of stress, and (c) factors that contribute to instances of abusive supervision. The findings of this study enhance our understanding of goal setting, stress, and abusive supervision in organizations.

## **APPENDIX A: SURVEY ITEMS**

*Supervisors' goal difficulty* (Locke & Latham, 1990)

1. The goals I have on this job are challenging but reasonable (neither too hard nor too easy).
2. My goals are too difficult.
3. I often fail to obtain my goals.

*Supervisors' hindrance stress* (LePine et al., 2005)

1. Working to fulfill my job jobs thwarts my personal growth and well-being
2. In general, I feel that my job goals hinder my personal accomplishment
3. I feel that my job goals constrain my achievement of personal goals and development

*Supervisors' goal-contingent reward*

4 items from the Goal Setting Questionnaire (Locke & Latham, 1990)

1. If I reach my goals, I feel that this will enhance my job security.
2. If I reach my goals, it increases my chance for a pay raise.
3. If I reach my goals, it increases my chance for a promotion.
4. I get credit and recognition when I attain my goals.

Measure of Instrumentality (Sanchez et al., 2000)

1. If I reach my goals, I have a good chance of receiving a bonus.
2. If I reach my goals, I will increase my pay.
3. I will get a bonus if I reach my goals.
4. Reaching my goal will affect whether I get promoted.

*Reward interdependence* (Campion et al., 1993; Allen et al., 2003)

1. My subordinates' performance affects whether or not I receive my rewards.
2. Many rewards from my job (e.g., pay, promotion, etc.) are determined in large part by my subordinates' performance.
3. If my subordinates do not perform well, I will not receive my rewards.
4. My rewards are affected by the performance of my subordinates.

*Abusive supervision* (Tepper, 2000)

1. My boss ridicules me.
2. My boss tells me my thoughts or feelings are stupid.
3. My boss gives me the silent treatment.
4. My boss puts me down in front of others.
5. My boss invades my privacy.
6. My boss reminds me of my past mistakes and failures.
7. My boss doesn't give me credit for jobs requiring a lot of effort.
8. My boss blames me to save himself/herself embarrassment.
9. My boss breaks promises he/she makes.
10. My boss expresses anger at me when he/she is mad for another reason.
11. My boss makes negative comments about me to others.
12. My boss is rude to me.
13. My boss does not allow me to interact with my coworkers.
14. My boss tells me I'm incompetent.
15. My boss lies to me.

*Supervisors' Trait Anxiety* (Spielberger, 1983)

1. Some unimportant thoughts run through my mind and bother me.
2. I worry too much over things that really don't matter.
3. I get in a state of turmoil when I think about my recent concerns.
4. I have disturbing thoughts.
5. When disappointments happen, I can't put them out of my mind.

*Supervisors' Anger* (Robinson & Morrison, 2000)

1. I feel a great deal of anger toward my supervisor.
2. I feel extremely frustrated by how I have been treated by my supervisor.

*Supervisors' Challenge Stress* (LePine et al., 2005)

1. Working to fulfill my job goals helps to improve my personal growth and well-being.
2. In general, I feel that my job goals promote my personal accomplishment.
3. I feel that my job goals challenge me to achieve personal goals and accomplishment.



## **APPENDIX B: FIGURES**

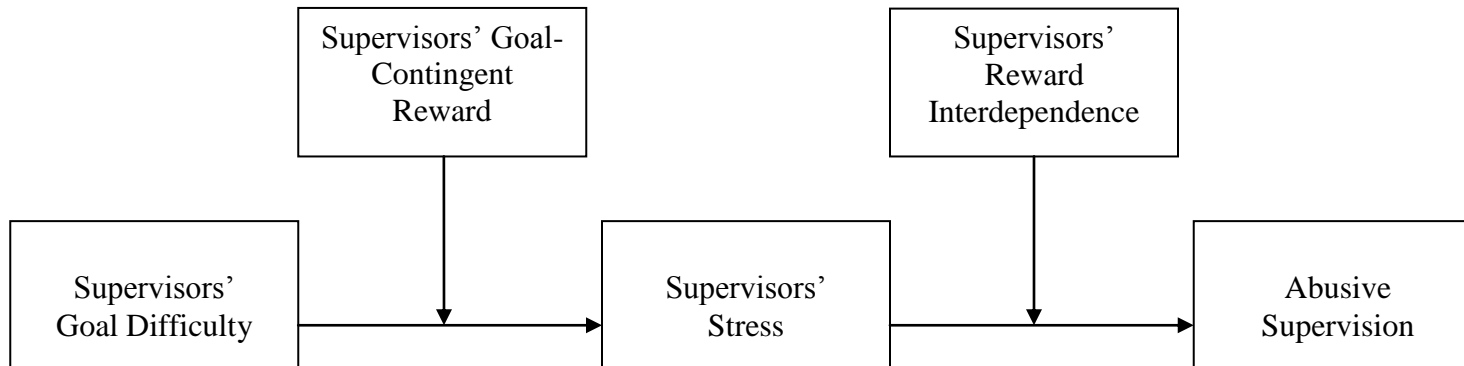


Figure 1. Proposed Relationships Among Variables



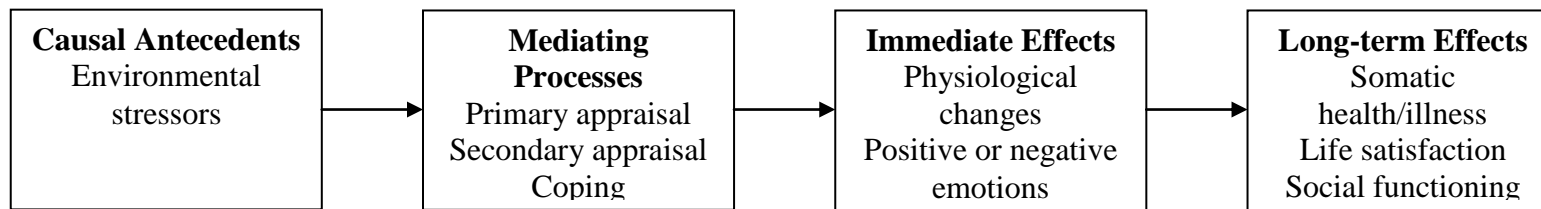
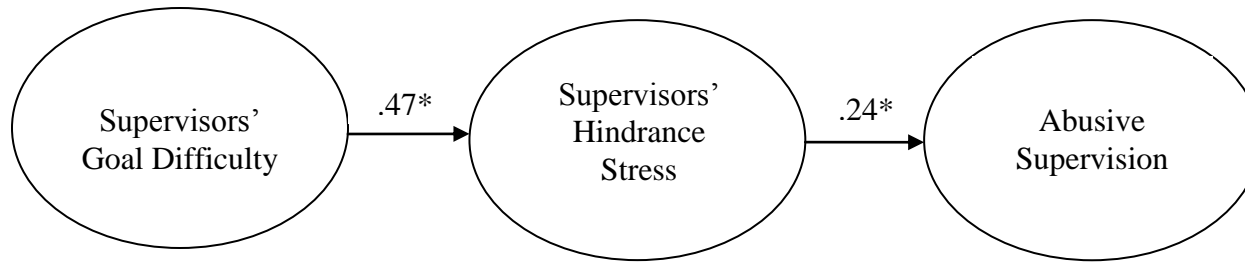
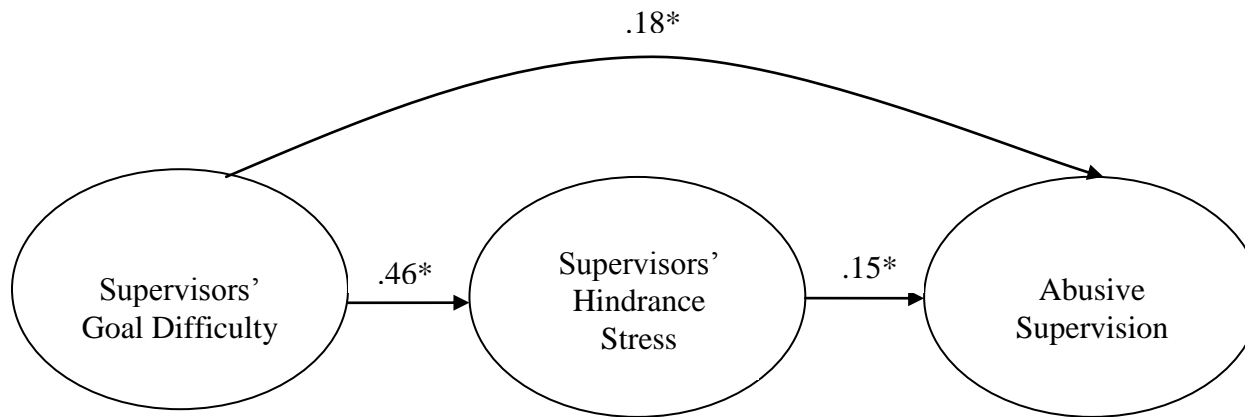


Figure 2. A Theoretical Schematization of Stress, Appraisal, and Adaptation (Lazarus & Folkman, 1984)



*Notes.*  $N = 257$ . \* $p < .05$ . \*\* $p < .10$

Figure 3. Structural Model – Supervisors' Hindrance Stress as a Full Mediator



*Notes.*  $N = 257$ . \* $p < .05$ . \*\* $p < .10$

Figure 4. Structural Model – Supervisors' Hindrance Stress as a Partial Mediator

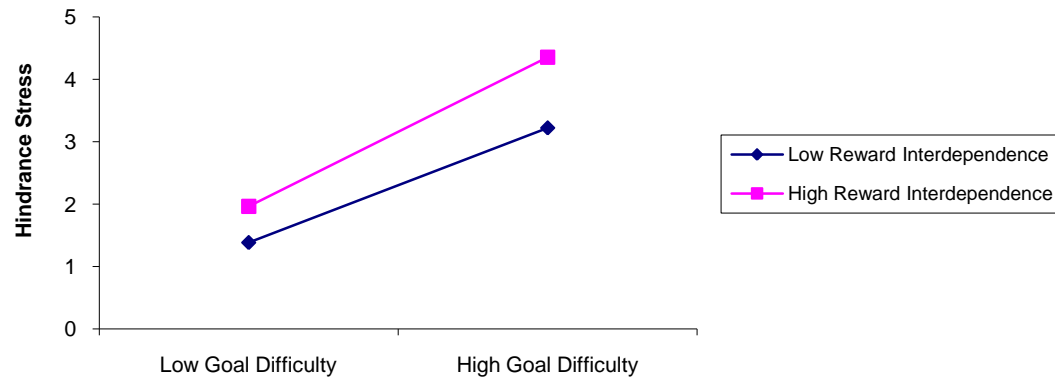


Figure 5. Post Hoc Analyses: Plot of Interaction of Supervisors' Goal Difficulty and Supervisors' Reward Interdependence on Supervisors' Hindrance Stress

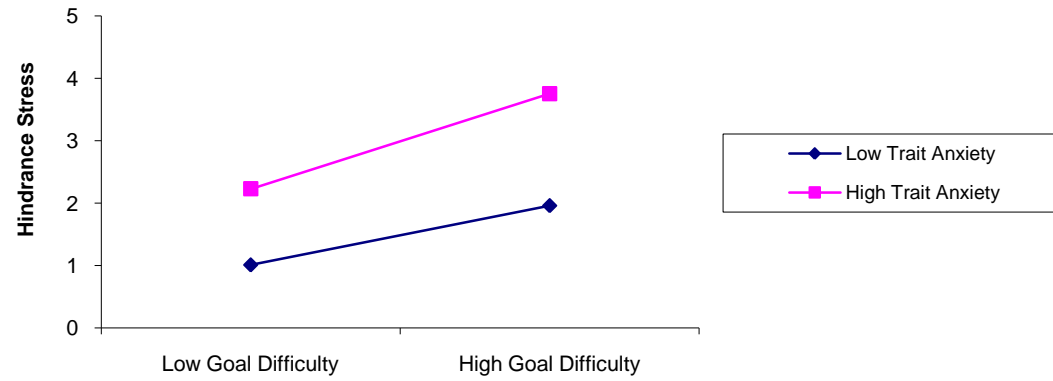
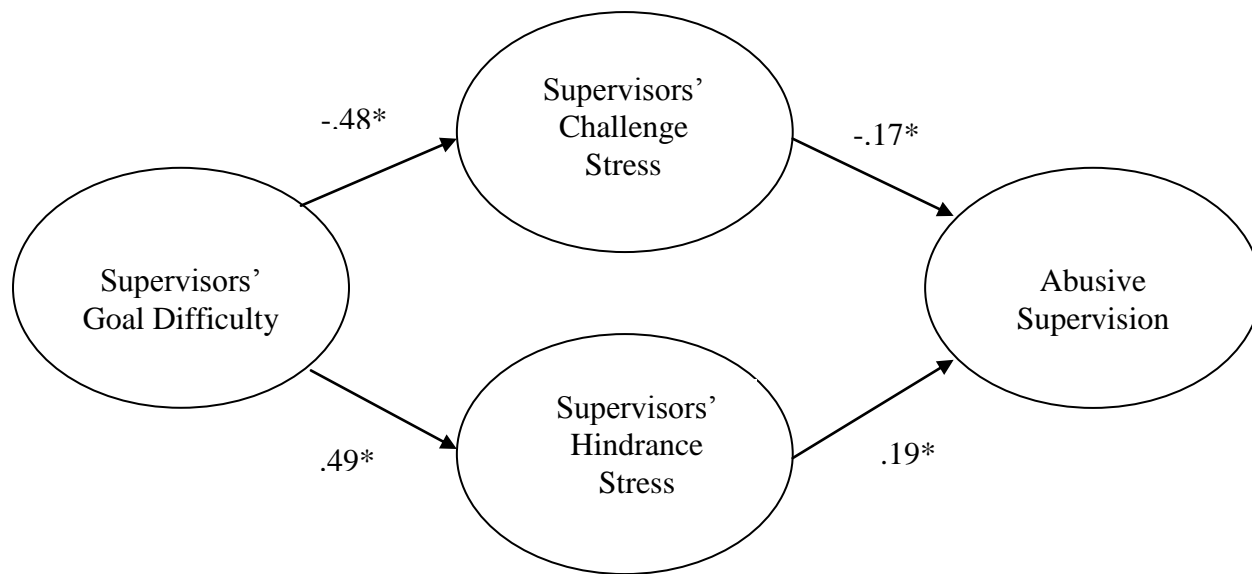
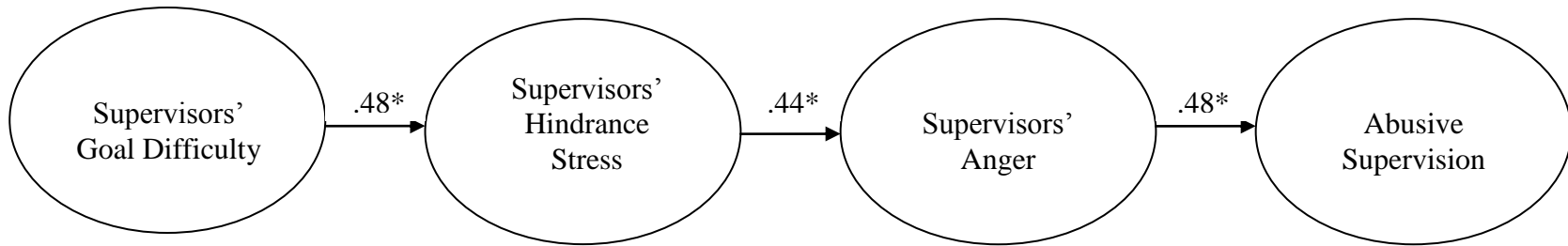


Figure 6. Post Hoc Analyses: Plot of Interaction of Supervisors' Goal Difficulty and Supervisors' Trait Anxiety on Supervisors' Hindrance Stress



Notes.  $N = 257$ .  $*p < .05$ .  $**p < .10$

Figure 7. Post Hoc Analyses: Structural Model –Supervisors' Challenge Stress and Hindrance



Notes.  $N = 257$ . \* $p < .05$ . \*\* $p < .10$

Figure 8. Post Hoc Analyses: Structural Model – Supervisors' Hindrance Stress and Anger as Full Mediators

## APPENDIX C: TABLES



Table 1. Constructs related to abusive supervision

Construct	Definition
Abusive supervision	“Subordinates’ perceptions of the extent to which their supervisors engage in the sustained display of hostile verbal and non-verbal behaviors, excluding physical contact” (Tepper, 2000: 178).
Petty tyranny	Managers’ use of power and authority “oppressively, capriciously, and... vindictively” (Ashforth, 1997).
Supervisor aggression	Supervisor behavior “that is intended to physically harm a worker or workers in the work-related context” (Schat et al., 2006).
Supervisor undermining	Supervisor “behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation” (Duffy et al., 2002).
Destructive leadership	Supervisor “behaviours by a leader...that violate the...interest of the organisation by undermining and/or sabotaging the organisation’s goals, tasks, resources, and effectiveness and/or the motivation, well-being, or job satisfaction of subordinates” (Einarsen et al., 2007).
Workplace bullying	Occurs when an individual “persistently over a period of time, is on the receiving end of negative actions from one or several others, in a situation where the one at the receiving end may have difficulty defending him or herself against these actions” (Zapf & Einarsen, 2001: 369).
Victimization	“The individual’s self-perception of having been exposed, either momentarily or repeatedly, to aggressive actions emanating from one or more other persons” (Aquino, 2000: 172).

Table 2. Scale means and correlations among the study's variables

	M	SD	1	2	3	4	5
1. Supervisors' Goal Difficulty	2.44	1.25	1.00				
2. Supervisors' Goal-Contingent Reward	3.02	1.49	-.18*	1.00			
3. Supervisors' Hindrance Stress	5.20	1.23	.34*	-.01	1.00		
4. Supervisors' Reward Interdependence	4.34	1.71	.04	.25*	.16*	1.00	
5. Abusive Supervision	1.65	1.03	.20*	-.08	.19*	.10	1.00

Notes.  $N = 257$ . \* $p < .05$ . \*\* $p < .10$

Table 3. Moderated mediation results: Mediator variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	-.00	.09	-.05	.96
Supervisors' Goal Difficulty	.41*	.07	5.80*	.00*
Supervisors' Goal-Contingent Reward	.08	.07	1.08	.28
Supervisors' Goal Difficulty x Supervisors' Goal-Contingent Reward	.01	.06	.10	.92

Notes. *N* = 257. \**p*<.05. \*\**p*<.10

Table 4. Moderated mediation results: Dependent variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	.03	.07	.38	.71
Supervisors' Goal Difficulty	.13*	.06	2.23*	.03*
Supervisors' Goal-Contingent Reward	-.09	.06	-1.57	.28
Supervisors' Goal Difficulty x Supervisors' Goal-Contingent Reward	-.07	.05	-1.47	.92
Supervisors' Hindrance Stress	.09**	.05	1.82**	.07**
Supervisors' Reward Interdependence	.07	.04	1.58	.12
Supervisors' Hindrance Stress x Supervisors' Reward Interdependence	.02	.03	.67	.50

Notes. *N* = 257. \**p*<.05. \*\**p*<.10

Table 5. Post hoc analyses: Reward interdependence as a moderator of the first path of the mediation – Mediator variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	-.02	.09	-.18	.86
Supervisors' Goal Difficulty	.38*	.07	5.48*	.00*
Supervisors' Reward Interdependence	.15*	.05	2.79*	.01*
Supervisors' Goal Difficulty x Supervisors' Reward Interdependence	.10*	.04	2.40*	.02*

Notes. *N* = 257. \**p*<.05. \*\**p*<.10

Table 6. Post hoc analyses: Reward interdependence as a moderator of the first path of the mediation – Dependent variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	.04	.06	.70	.49
Supervisors' Goal Difficulty	.14*	.05	2.53	.01*
Supervisors' Reward Interdependence	.05	.04	1.22	.22
Supervisors' Goal Difficulty x Supervisors' Reward Interdependence	.02	.03	.55	.58
Supervisors' Hindrance Stress	.08	.05	1.79	.07**

Notes. *N* = 257. \**p*<.05. \*\**p*<.10

Table 7. Post hoc analyses: Trait anxiety as a moderator of the first path of the mediation –

Mediator variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	-.05	.09	-.18	.86
Supervisors' Goal Difficulty	.24*	.07	3.30*	.00*
Supervisors' Trait Anxiety	.34*	.07	4.91*	.00*
Supervisors' Goal Difficulty x Supervisors' Trait Anxiety	.08*	.04	1.97*	.04*

Notes. *N* = 257. \**p*<.05. \*\**p*<.10

Table 8. Post hoc analyses: Trait anxiety as a moderator of the first path of the mediation –

Dependent variable model

	Coefficient	SE	<i>T</i>	<i>p</i> -value
Constant	.01	.07	.20	.84
Supervisors' Goal Difficulty	.09	.06	1.64	.11
Supervisors' Trait Anxiety	.12*	.06*	2.13	.03*
Supervisors' Goal Difficulty x Supervisors' Trait Anxiety	.05	.03	1.65	.10
Supervisors' Hindrance Stress	.05	.05	1.08	.28

Notes. *N* = 257. \**p*<.05. \*\**p*<.10



**APPENDIX D: IRB SUBMISSION LETTERS**



Management Department

February 23, 2009

To Whom It May Concern:

I was the principal investigator for a large data collection done by faculty members and Ph.D. candidates and students in the Management Department in the College of Business at the University of Central Florida. I received IRB approval for this large data collection (IRB Number: SBE-08-05710) on June 19, 2008.

I am writing to verify that Mary Bardes, a Ph.D. candidate in the Management Department, participated in this data collection. The IRB form that was approved included the survey items that Mary used to collect data for her dissertation. The approval letter from the IRB is attached. If you require any additional information, please contact me at 407-823-5384 or [rgreenbaum@bus.ucf.edu](mailto:rgreenbaum@bus.ucf.edu).

Sincerely,

A handwritten signature in black ink, appearing to read "Rebecca Greenbaum".

Rebecca Greenbaum  
Management Department  
University of Central Florida

College of Business Administration  
P.O. Box 161400 • Orlando, FL 32816-1400 • 407-823-5569 • Fax: 407-823-3725

An Equal Opportunity and Affirmative Action Institution



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901, 407-882-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Notice of Expedited Initial Review and Approval

From : UCF Institutional Review Board  
FWA00000351, Exp. 5/07/10, IRB00001138

To : Rebecca Greenbaum

Date : June 19, 2008

IRB Number: SBE-08-05710

Study Title: **Perceptions of Supervisors' Morally Questionable Expediency and Other Ethically Questionable Behaviors**

Dear Researcher:

Your research protocol noted above was approved by **expedited** review by the UCF IRB Vice-chair on 6/19/2008. **The expiration date is 6/18/2009.** Your study was determined to be minimal risk for human subjects and expeditable per federal regulations, 45 CFR 46.110. The category for which this study qualifies as expeditable research is as follows:

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

A **waiver of documentation of consent** has been approved for all subjects. Participants do not have to sign a consent form, but the IRB requires that you give participants a copy of the IRB-approved consent form, letter, information sheet, or statement of voluntary consent at the top of the survey.

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a minimum of three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

To continue this research beyond the expiration date, a Continuing Review Form must be submitted 2 – 4 weeks prior to the expiration date. Advise the IRB if you receive a subpoena for the release of this information, or if a breach of confidentiality occurs. Also report any unanticipated problems or serious adverse events (within 5 working days). Do not make changes to the protocol methodology or consent form before obtaining IRB approval. Changes can be submitted for IRB review using the Addendum/Modification Request Form. An Addendum/Modification Request Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <http://iris.research.ucf.edu>.

**Failure to provide a continuing review report could lead to study suspension, a loss of funding and/or publication possibilities, or reporting of noncompliance to sponsors or funding agencies.** The IRB maintains the authority under 45 CFR 46.110(e) to observe or have a third party observe the consent process and the research.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 06/19/2008 04:37:52 PM EDT

IRB Coordinator

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