

AN ABSTRACT OF THE THESIS OF

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Title: The “Who” and “When” of Bad Bosses: Implicit Aggression and Resource Depletion  
as Interactive Predictors of Abusive Supervision and Supervisor Rudeness

Abstract approved: \_\_\_\_\_

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To explore the possible causes of abusive supervision and rudeness, I used an interactive approach to test whether one domain of implicit personality (implicit aggression) and self-control resource depletion are interactive predictors. By using a sample of 83 students in a large public university in the North Western United States, I found that leader’s implicit aggression level is a predictor of abusive supervision. Additionally, this study also found that subordinate’s implicit aggression level will affect the extent to which they perceive leader’s rudeness and interpersonal justice. I conclude with a discussion of both theoretical and managerial implications for the workplace.

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The “Who” and “When” of Bad Bosses: Implicit Aggression and Resource Depletion  
as Interactive Predictors of Abusive Supervision and Supervisor Rudeness

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## INTRODUCTION

Abusive supervision is defined as “subordinates’ perceptions of the extent to which their supervisors engage in the sustained display of hostile verbal and nonverbal behavior, excluding physical contact” (Tepper, 2000, p. 178). An estimated 13.6% of employees in the United States have experienced abusive supervision (Tepper, 2007), and significantly, Tepper and colleagues (2006) showed that a conservatively estimated annual cost for abusive supervision (including absenteeism, lost productivity and health care) is about 23.8 billion dollars nationally. Hence, abusive supervision is not only a leadership issue, but also an impactful economic and social problem.

Abusive supervision directly leads to many adverse workplace outcomes, including reduced job satisfaction, increased workplace deviance and decreased organizational citizenship behavior (Schat, Desmarais & Kelloway, 2006; Schaubhut, Adams & Jex, 2004; Aryee et al., 2007; Tepper, 2000; Hoobler & Brass, 2006). Tepper (2007) argued that abusive supervision is a complex multi-level phenomenon and may be influenced by supervisor-level, organizational-level and national culture-level factors, but prior empirical work has overwhelmingly focused on the consequences (rather than the causes) of abusive supervision. Although knowing the consequences of abusive supervision can alert us to its impacts, identifying the antecedents of abusive supervision could allow us to prevent abusive supervision from happening in the first place.

Early theorizing about the Big 5 personality model suggests that certain stable personality traits may be drivers of mistreatment (Costa & McCrae, 1992). Linking the Big-5

personality model to abusive supervision provides us with a measurable predictor for abusive supervision, in the sense that we can predict abusive supervision tendency through one's explicit (self-reported) personality. However, there are three limitations to this argument: individual differences do not uniformly impact behavior across all situations (Davis-Blake & Pfeffer, 1989); and self-reported personality may not adequately describe enduring traits most related to aggression (Jams et al., 2005). Hence, to fully understand the influences of personality to abusive supervision, we may need to consider another part of people's personality, implicit personality.

“Unlike explicit personality, implicit personality represents patterns of behavior that an individual is not consciously aware of and consists of components of cognitive structures (e.g. implicit motives) and cognitive processes (e.g. defense mechanisms) that are not accessible by introspection” (Frost, Ko, & Jams, 2007, p. 1299 ). Explicit personality is measured by processing information that contains valid information that is introspectively accessible to the individual and invalid information that is motivated by self-deceptive tendencies and self-measurement error. In contrast, implicit personality is measured by processing information containing valid information that can be obtained through an indirect particular measurement tool (e.g. the CRT-A), and invalid information due to systematic biases and errors of the measurement tool (Asendorpf, Banse, & Mücke, 2002). Accordingly, aggressive people may not be aware of their strong desire to commit aggression because they tend to engage in the self-deception when reporting their explicit personality. Hence, in terms of

measuring aggressive personality, implicit measures may be more effective than explicit measures to counter the self-deception.

Aggressive behavior is behavior that intends to cause physical, verbal, emotional harm to others (Frost et al., 2007). Thus, given that abusive supervision is not physical contact but verbal and nonverbal behavior (Tepper, 2000), we may consider abusive supervision a mild level of aggressive behavior. However, organizational settings are unique, in that they are “strong situations” with clear expectations for normative behavior (Davis-Blake & Pfeffer, 1989). Accordingly, dispositionally aggressive individuals may attempt to inhibit their aggressive behavior in the workplace, to the extent to which they believe that aggressive behavior would not be well received. I next suggest that while implicit aggression may explain “who” is likely to engage in abusive supervisory behavior, “when” they will do so may best be explained by the depletion of self-control resources.

Mroczek and his colleagues (2003) stressed that “between-persons differences are essential for practitioners and researchers to grasp, because in this source of variance we observe human individuality” (p. 261). However, looking exclusively at individual differences ignores that context may also differentially impact behavior (Johns, 2006). Importantly, according to Lewin's equation, behavior is the function of an interaction between person and situation,  $B=f(P, E)$  (Lewin, 1951). Therefore, within-personal variation (i.e., differences in the same person's behavior as a function of context) also plays a significant role in determining human behavior. For example, researchers found that a within-person standard deviation (at the day-level) for work engagement is almost as large as

that for between-person (Demerouti & Bakker, 2012). Ilies and his colleagues (2007) found that “more than 44 % of the total variance in the workload and more than 40% of the total variance in the work-to-family conflict was due to within-individual variance” (p. 9). Scott and his colleagues (2012) showed that approximately half of variance in emotional labor is within-person. And most relevantly, Johnson and his investigators (2012) found that there were remarkable proportions of within-person variance (61%) for abusive leadership behavior. In other words, leaders’ abusive behavior does not only vary between persons, but within persons as well. From this angle, both the supervisors’ personality and the situations supervisors face may both represent factors.

Leaders may often involve the situations or the events that induce aggressive impulses to engage in abusive supervision when they interact with their perceived “problem subordinates”. One common issue supervisors generally face is self-control resources depletion. The findings of prior work suggest that depletion of self-control resource can lead to immoral behavior. For instance, people are more likely to lie and cheat when their self-control resources are depleted (Mead et al., 2009; Christian & Ellis, 2011). Accordingly, my study seeks to identify antecedents of abusive supervision, using a person-in-context approach by integrating between-person variance (implicit personality) and within-person variance (self-control resource depletion).

Like abusive supervision, rudeness is a negative behavior in the workplace (Porath & Erez, 2007). However, unlike abusive supervision that is defined as more impactful and overt behavior, rudeness is defined as one type of workplace incivility characterized by a

non-obvious intent to harm and low intensity (Andersson & Pearson, 1999). Since rudeness is a type of incivility with a non-obvious intent and low intensity, its effects are often ignored by organizations and leaders. However, research showed that rudeness will bring several consequences to employees such as reduced creativity and helpfulness (Porath & Erez, 2007). Thus, examining predictors of workplace rudeness seems consequential.

The goal of my present study is to examine whether one domain of implicit personality (implicit aggression) and self-control resource depletion are interactive predictors of abusive supervision and supervisor rudeness. The overall hypothesis of my study is that individuals who are high in implicit aggression will engage in a higher level abusive supervision, when they experience depleted self-control resources. Importantly, my study differs from prior studies in two meaningful ways. First, I examine implicit personality through the CRT-A (Conditional Reasoning Test for Aggression), which focuses on how individuals justify their behavior rather than self-report measures. Second, I take an interactive approach, examining person-in-context effects. Specifically, I suggest that self-control resources depletion increase the likelihood that certain individuals will be less able to overcome their latent aggressive impulses, leading to increased abusive behavior.

## LITERATURE REVIEW AND HYPOTHESIS

### Outcomes of Leadership Behavior

Leadership remains a focal topic within the field of organizational behavior, and many studies have explored how leaders interact with their subordinates and the consequences linked to different leader behaviors (Bass, 1990). Most of these studies try to identify the characteristics of various leadership styles and the favorable results associated to each of them. For example, Yang and his colleagues (2011) showed that a leader can improve communication, collaboration and cohesiveness in a team by applying transactional and transformational leadership. Other studies have demonstrated that paternalistic leadership can increase employee flexibility, decrease turnover intention and improve organizational commitment (Farh et al., 2006; Padavix & Earnest 1994). Within the past 20 years, the desire to explore the dark side of leadership behavior has motivated many researchers to focus on the leaders' mistreatments of subordinates, such as supervisor aggression, supervisor undermining and abusive supervision. Among all the negative aspects leadership, abusive supervision has captured the most attention from researchers (Tepper, 2007). Prior studies have uncovered that abusive supervision will directly lead to many negative results affecting workers' jobs such as low job satisfaction, workplace deviance and decreased organizational citizenship behavior and workers' ordinary life issues such as work-family conflict, psychological distress and family-directed aggression (Aryee et al., 2007; Hoobler & Brass, 2006; Schat, Desmarais & Kelloway, 2006; Schaubhut, Adams & Jex, 2004; Tepper & Lockhart, 2005; Tepper, 2000).

## **Causes of Abusive Supervision**

Theory and research on abusive behavior have focused much more on its consequences than causes (Tepper, 2007). Although the consequences are significant, a deeper understanding of the causes of abusive supervision may, at least to some extent, prevent abusive supervision from happening. Hence, exploring why and under what circumstances abusive supervision occurs has drawn increasing attention from researchers. At the individual level of analysis, Tepper and his coauthors (2011) found that leaders' perceived relationship conflict and perceived deep-level dissimilarity with subordinates are predictors of abusive supervision. At the organizational level, another study showed that the norms in the organization such as rationality to use abusive behavior to positively predict abusive supervision (Tepper, 2007). Cultural factors such as high power distance in some countries also lead to frequent abusive supervision in those regions because it is common to have unequal power distribution in those countries and more acceptable for leaders to invoke abusive supervision (Hofstede, 2001).

## **Lack of Consideration of Implicit Personality**

My study focuses on one individual level factor (and one contextual boundary condition) that I argue is related to abusive supervision: leaders' implicit personality. Critically, personality has been theorized to exist at two levels of awareness. Psychologists define explicit personality as the part of the personality of which the person is aware (and which is readily self-reported) and implicit personality as another part of personality of which the person is unaware (Frost, Ko & Jams, 2007). Some studies have examined or suggested the

relationship between explicit personality and negative leadership behaviors. Leaders high in neuroticism tend to be “thin-skinned and hostile” toward subordinates (Brown and Treviño, 2006) and they are also less likely to have ethical leadership (Walumbwa & Schaubroeck, 2009). Besides, there is a positive relationship between trait anger and workplace aggression because of the tendency to perceive situation as frustrating (Douglas & Martinko, 2001). And most relevantly, Costa and McCrae theorized that the Big-5 personality dimensions related to abusive supervision are neuroticism and agreeableness and suggested that leaders who are high in neuroticism or low in agreeableness are more likely to engage in abusive supervision (Costa & McCrae, 1992). However, with rare exception, the value of implicit personality for explaining negative leadership behavior is still untested (Frost, Ko & James, 2007). Lack of consideration in implicit personality may result from Industrial-Organizational (I-O) psychologists’ history of relying on participants’ self-reports to measure their personality (Frost, Ko & James, 2007). Additionally, I-O psychology is traditionally based on explicitly oriented psychometrics, while implicit personality is based on psychodynamics, which has until recently maintained a sordid history within the field of psychology (Westen, 1998). Accordingly, the initial reason for the lack of research on relationships between implicit personalities and behaviors may be that I-O psychologists are not familiar or comfortable with the techniques to measure personality through implicit personality measurement tools. However, researchers stressed that explicit personality and implicit personality generally predict different behaviors and unique variance in meaningful ways (Bornstein, 2002).

### **Implicit Aggression and the CRT-A**

Research has shown that “about 12% of people from the general population have moderately strong to strong motive to aggress” (Jam et al., 2005, p. 72). Researchers have argued that one’s personality-driven motives have two components: explicit and implicit (McClelland, Koestner & Weinberger, 1989). Based on the hypothesis (Winter et al., 1998) that explicit and implicit personality often interact with each other to determine behaviors, Frost, Ko & James (2007) found that athletes who are high in both implicit aggression and explicit aggression are most likely to enact overt aggression, and that athletes who are high in implicit aggression but low in explicit aggression are more likely to enact aggression passively. Importantly, Baumeister and his colleagues (2003) suggested that the motive to aggress is largely implicit, and that motive to aggress will conflict with the motive to keep a sense of positive self-worth. Thus, acknowledging one’s own dispositional aggression to one’s self would create significant dissonance for most people, such that they seek to justify their aggression and maintain a positive self-perception. “People tend to believe that their behaviors are rational rather than irrational, impulsive and foolish, which will lead to an unconscious defensive process (“defense mechanism”) that makes it possible for people to express aggression and simultaneously protect their sense of self-worth” (Cramer, 2000, p. 640). Specifically, rationalization is one of the primary defense mechanisms aggressive individuals apply to create the self-deception that allows them to engage in aggressive behaviors, but still appear reasonable (Westen & Gabbard, 1999). Through rationalization, aggressive individuals will engage in the self-deception and build the rational reasoning for their aggressive inclinations or behaviors (Loewenstein et al., 2001). James (1998) announced

six justification mechanisms (JMs) aggressive individuals may use to build the logical foundations to justify their aggression motive. Briefly, the six proposed JMs listed by James (1998) are 1) hostile attribution bias (the tendency to feel hostility and danger of others' behaviors), 2) potency bias (the tendency to believe that interactions with others are "contests for dominance"), 3) retribution bias (the tendency to believe that reconciliation is less rational than retaliation), 4) victimization by powerful others bias (the tendency to see inequity and exploitation in the behaviors of powerful others), 5) derogation of target bias (the tendency to believe that aggression targets of others are immoral, untrustworthy or evil) and 6) social discounting bias (the tendency to believe that they are free to behave however they want). Other researchers also proposed a set of similar mechanisms, but the mechanisms they suggested mostly overlap with JMs (Frost, Ko & James, 2007). Importantly, among six JMs, three of them are most related to our hypothesis. They are potency bias, hostile attribution bias and derogation of target bias; I will describe links between each of them and my hypothesis later.

The CRT-A measures people's implicit aggression on the basis of aggressive individuals' JMs embedded in the conditional reasoning alternatives they favor. The example in figure 1 illustrates the CR procedure. Alternative D is the aggressive alternative. In this case, people who answer alternative D determine that answer is appropriate based on the victimization bias and the retribution bias (Frost, Ko & James, 2007). Accordingly, those people have the tendency to prefer retribution and attacking first to avoid being attacked, showing their aggression tendency (Frost, Ko & James, 2007). Alternative B is the nonaggressive

alternative, which meets nonaggressive individuals' desire for prosocial behavior (Frost, Ko & James, 2007). Answering alternative D will add one point to the total score and answering alternative B will minus one point from the total score. There is no change in the total score, if respondents answer illogical alternative A or C.

Many psychological theories believed that "people are often not aware of the full extent of their desire to harm others" (Frost, Ko & Jams, 2007, p. 1301). Potency bias states the tendency to believe that interactions with others are "contests for dominance" and hostile attribution bias reflects the tendency to feel hostility of others' behaviors. Subordinates' behaviors that do not meet leaders' instruction or expectation may be perceived by leaders as "hostilely questioning authority". Hence, individuals who are high in implicit aggression are likely to use both potency bias and hostile attribution to justify their abusive motive, when their subordinates' performances do not match what they expect, because they may interpret the circumstance as "hostile contests for dominance". Besides, derogation of target bias reflects the tendency to derogation aggressive target's status. Given subordinates are in low power status, individuals who are high in implicit aggression are likely to use derogation of target bias to justify their abusive motive, because they may link "lower power" to "untrustworthy" or other signs of low power status. All in all, using JMs to build the rationalizations for aggressive behaviors, implicitly aggressive individuals are highly likely to engage in abusive supervision without awareness of their aggressive motive. Therefore, I propose:

Hypothesis 1: Individuals who are high in implicit aggression will engage in a greater level of abusive supervision.

### **Self-Control Resource Depletion**

According to Lewin's equation (1936), most behavior is the result of an interaction between the personality (P) and the situation (i.e., the environment, "E"). Surprisingly, research to date has generally overlooked a person-in-context approach, which would suggest that contexts facilitate or inhibit the expression of individual traits. In this study, I suggest that depletion of self-control resources represent a meaningful boundary condition for the effects of implicit aggression on abusive supervision, In other words, my study expects that the interaction between implicit aggression and self-control resource depletion directly links to abusive supervision, such that aggressive individuals will engage in significantly more abusive supervisory behavior when their self-control resources are limited. Self-control is defined as the activity to overcome some impulses such as to maintain behaviors that meet the social norms and moral standards (Baumeister, Heatherton, & Tice, 1994). Self-control process may include controlling oneself, controlling the environment and making decisions (Baumeister et al., 1998). According to the Ego Depletion model established by Baumeister, people need to consume finite self-control resources to purposefully maintain self-control (Barnes, Schaubroeck, Huth & Ghumman, 2011). Consuming available resources through the persistent exertion of self-control will reduce imposers' ability to use self-control in other domains until the resource recovers again (Muraven et al., 2000). Accordingly, self-control resource is a limited pool that can be used up at a period of time (Baumeister, Heatherton, &

Tice, 1994). Similarly, researchers describe self-control metaphorically as a moral muscle that keeps people behave in socially desirable ways (Baumeister & Exline, 1999). Research stresses that once self-control resource becomes depleted, people incline to behave immorally, partly because the moral muscle lose some of its strength (Muraven, Tice, & Baumeister, 1998). For example, frustration (due to resource depletion) with the slow progress of the project or interpersonal conflict may lead to an urge to yell at a given subordinate (Tepper, Moss & Duffy, 2011). Although many researchers have pointed out that depletion of self-control resources may lead to immoral or interpersonally deviant behaviors, no research specifically demonstrates that depletion of self-control resources of leaders will lead to abusive supervision, and research to date has generally ignore the idea that individuals (as a function of dispositional aggression) may be differentially prone to behaving aggressively when depletion occurs.

Because abusive leadership behavior is predicted by remarkable proportions of within-person variance (61%) (Johnson et al, 2012), aggressive individuals may not engage in abusive supervision all the time but occasionally. Importantly, most dispositional aggressive individuals are aware of the social norms and constraints against abusing their subordinates. However, when abusive individuals' self-control resources are depleted, their aggressive impulses are less likely to be restrained and they tend to engage in aggressive behaviors. Hence, while non-aggressive individuals should be no more likely to engage in aggression when their self-control resources are depleted, and while implicitly-aggressive individuals should recognize the norms of workplace behavior and inhibit their aggression when

self-control resources are available, those individuals who are implicitly aggressive and whose self-control resources are depleted should be especially prone to aggressive behavior.

Hence, I propose:

Hypothesis 2: Implicitly aggressive individuals will engage in a greater level of abusive supervision when they experience self-control resource depletion, but the relationship between implicitly aggressive and abusive supervision will be weaker when self-control resource depletion is not experienced.

### **Rudeness in Workplace**

Beyond anticipating implicit aggression as a predictor of abusive supervision, I expect that leader's rudeness can be another outcome of implicit aggression. Workplace incivility happens frequently and about 98% of workers have experienced incivility, costing approximately \$14,000 per employee in United State annually due to project delays, cognitive distraction and other costs such as employee withdrawal and voluntary turnover (Pearson & Porath, 2009). Compared to abusive supervision (more severe negative behavior), the intensity and intended harm of rudeness (mild negative behavior) is significantly less, so rudeness may be considered as "passive aggression". Additionally, because rudeness is defined by ambiguous intent, there are fewer and weaker social norms prohibiting rude behaviors compared to abusive supervision. Therefore, although aggressive individuals will attempt to overcome their aggressive impulses (and abstain from abusive supervision) when their self-control resources are adequate, they may still be likely to behave in subtly rude ways when self-control resources are sufficiently high. Because implicitly aggressive

individuals are motivated to harm others, they may view doing so in subtle ways (i.e., rudeness) as more acceptable. Hence, rudeness may be directly predicted by implicit aggression alone (a main effect), rather than through an interaction between implicit aggression and self-control resource depletion. Accordingly, I propose:

Hypothesis 3: Individuals who are high in implicit aggression will engage in a greater level of rudeness.

Figure 2 shows my theoretical model. Implicit aggression leads to abusive supervision with the moderator, self-control resource. However, implicit aggression may lead to rudeness without a moderator.

Figure 1. Illustrative CR Problem

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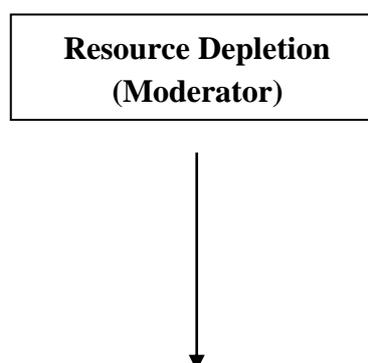
The old saying, "an eye for an eye," means that if someone hurts you, then you should hurt them back. If you are hit, then you should hit back. If someone burns your house, then you should burn their house.

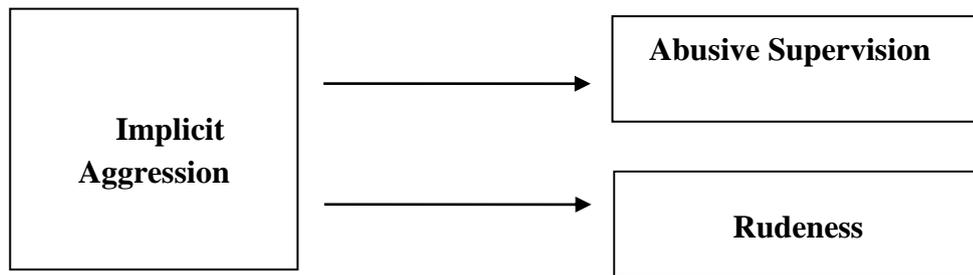
Which of the following is the biggest problem with the "eye for an eye" plan?

- A. It tells people to "turn the other cheek."
  - B. It offers no means to settle a conflict in a friendly way.
  - C. It can only be used at certain times of the year.
  - D. People have to wait until they are attacked before they can strike.
- 

*Note.* From "A Conditional Reasoning Measure for Aggression," by L. R. James et al., 2005, *Organizational Research Methods*, 8, p. 76

Figure 2. Theoretical Model





## METHOD

### Participants

The sample consisted of 244 undergraduate students enrolled in an undergraduate business classes at a large public University in the North Western United States. After excluding the students who did not complete the entire study, the usable sample size is 83 participants. Within my sample, 63.5 percent were male, 60.7 percent were white, and 41 percent were 22 or more than 22 years old. Of these, a total of 83 participants (assigned randomly to roles including 28 “leaders” and 55 “followers”) enrolled to complete the second portion of the study for a total usable sample of 55 leader/follower dyads. Participants in the study were recruited in exchange for the extra credit in their management course (for completing each of the survey and lab portions) and for the opportunity to win small prizes (lab portion only).

### Procedures

The study consisted of four total parts. First, participants took an online-survey that includes the CRT-A problems, other explicit measures of the Big-5 personality traits and common demographic items. A cover story were given that the CRT-A test is designed to assess their reasoning skills and the ways they evaluate problems, and that we are specifically interested in how personality and reasoning skills predict subsequent team performance.

Second, a few days to a week later, participants attended a lab session consisting of two parts: a proof-reading task (to manipulate resource depletion) and a team-task (deliberately designed to be frustrating such that abusive and rude behavior is likely to occur).

Before beginning the proof-reading task, participants were randomly assigned to a 3-person team and role by picking a role card. Each team consists of one leader and two subordinates (a picker and a placer). After choosing roles, participants started the proof-reading task. The proof-reading task (the “letter E task”) is a commonly-used method developed by Baumeister (1994) to manipulate self-control resource depletion. The first step of the proof-reading task required all 3 team members to proof-read a short paragraph that serves as a practice. The instruction of practice required participants to find and cross out all the “e” in the words in a short paragraph within two minutes (a particularly easy task). Then, team members were required to complete one of the two versions of a formal proof-read test with a ten-minute time limit. The formal proof-reading task had two versions, an easy version (control condition) and a challenging version (resource depletion condition). All subordinates completed the easy version, and leaders were randomly assigned to either the easy (control) or challenging (resource depletion) version. The instruction for the easy version was the same as that of the practice task, merely requiring participants to cross off all “e’s” that appear on a page of text. However, the challenge version required participants to find and cross out the letter “e” in the words of a short text, but not cross out the letter “e” if it is followed by a vowel or is embedded in a word in which a vowel appears two letters earlier. The challenging version of the task depletes resources, as it required participants to inhibit behavior (crossing off all e’s) that they have just engaged in during the practice stages (Hamilton et al., 2011). Thus, the difficult version of the proof-reading task should be sufficient to diminish their self-control resources available for the following team-task.

Third, after completing the proof-reading task, the three team members cooperated to complete a team-task, and each of them will enact a role based upon the role cards they received at the beginning of the session. The task is designed to three goals in mind to help simulate an interdependent work task within the constraints of the lab. First, the task was designed to be frustrating, such that abusive or rude behavior was likely to occur in a relatively short amount of time. Second, the task was designed such taking the perspective of the subordinates was not readily done—the subordinate tasks were deliberately “more difficult than they look” to increase the likelihood that the leader would become frustrated with their performance. Third, the task was designed to both heighten the sensitivity of the subordinates to aggressive behavior, while deindividuating (and disinhibiting) the leader. Thus, the task required a high level of self-control to avoid aggressive responding.

Their collective goal in the task was to accurately place eight different photo magnets in their respective places sequentially on a magnetic whiteboard, within a twelve-minute time limit. At the beginning of the team-task, they were notified that if their team can finish the task within twelve minutes, each of them will be rewarded with a movie voucher (to incentivize effortful performance). During this task, the leader was restricted to stand in a small limited area ten feet away from the other two team members, and used only verbal commands to help the picker and the placer. The picker was required to stand at the front of a box containing seventeen different photo magnets. The placer was required to stand at the front of the magnetic whiteboard that is painted with eight outlines for eight necessary magnets. The box (where the picker stands) was approximately five feet away from the placer,

requiring the picker to navigate to the placer to hand-off a chosen magnet. Importantly, to increase the difficulty of communication and create ambiguity within the task, the leader wore soundproof ear protection and the picker and the placer wore blindfolds. Because wearing ear protection (inhibiting hearing) should have a de-identifying effect on individuals, inhibiting seemingly aggressive (i.e., yelling) or rude (i.e., talking over someone else) behavior will require additional attention to self-control from the leader. And, because closing one's eyes polarizes and strengthens emotional responses (Caruso & Gino, 2011), the task increased the likelihood that participants will detect verbal aggression directed at them within the limited time frame.

When the team-task starts, the leader directed the picker to pull the next magnet from the box, based on the sequence (e.g. 1, 2, 3, 4, 5, 6, 7, and 8) on the magnetic whiteboard. The picker was only allowed to take out one magnet at a time from the box. Hence, the picker needed to repeatedly take out and replace the magnets until the right magnet was confirmed by the leader. To add to the difficulty of perspective taking, the box itself had a flexible and sloped fabric bottom, such that stacking previously chosen wrong magnets on the inside of the box is not possible. Thus, the picker was likely to appear poor-performing, as the same incorrect magnets were likely to be pulled on repeated trials. Once a magnet was chosen and confirmed by the leader, the leader needed to direct the picker to deliver the magnet to the placer. Then, using only verbal commands from the leader, the placer must position the magnets in the correct location following the correct sequence. A magnet was correctly placed once no outline for the space on the magnetic whiteboard was visible. Importantly,

every magnet had to cover about 90% of the shape to be considered successfully placed. Two features of the magnets made it especially likely that the leader will be likely to over-estimate the ease of the placer's job. First, the magnets themselves were especially thin, such that they were difficult to manipulate once stuck to the board. Second, because the magnets were actually placed on a thin piece of paper over the magnetic board, the surface itself flexes, making small corrections especially difficult. Previous studies have shown that frustration (due to resource depletion) with a slow progress of project or interpersonal conflict may lead to an urge to yell toward a given subordinate (Tepper, Moss & Duffy, 2011). Hence, to increase frustration further, the eighth necessary magnet was missing from the box, and the task was thus insolvable. The time limit for the team-task (twelve minutes) was determined after extensive pretesting, such that the amount of time remaining once the team reaches the final (missing) magnet was between thirty and ninety minutes. Pretesting has determined that this was sufficient time for participants to become frustrated as the correct magnet was never drawn, but insufficient time for participants to definitively conclude that the piece is missing.

Fourth, immediately after completing the team-task, all participants took post-surveys via computers in another room. The survey included scales specific to the leader and the subordinates to evaluate their team members' behaviors (and for the subordinates, the leader) during the team-task, including the abusive supervision scale and leader rudeness scale. Subordinates assessed their leaders' behaviors during team-task. In contrast, the post-survey for leaders focused on subordinates' behaviors during the team-task. After the post-survey, each of three participants was rewarded with a movie voucher (regardless of failed

performance) and dismissed from the study. All participants were debriefed via email, once the study was completed.

### **Measures of Implicit Aggression and Explicit Personality**

In the online survey, participants responded to the following materials: 1) a consent form, 2) a measure of implicit aggression, 3) a measure of explicit personality, and 4) some demographic questions regarding age, education and race.

CRT-A was used to measure participants' implicit aggression. The CRT-A has 22 conditional reasoning (CR) problems and 3 traditional reasoning questions used to provide face validity to participants. Each CR problem has an aggressive alternative (that is logically correct), a nonaggressive alternative (that is logically correct) and two illogical alternatives. Indeed, the higher the total score of the CRT-A, the more likely that the respondents have implicitly tendency to justify engaging in aggressive behavior. The higher the total score of the CRT-A (ranges from -25 to 26), the stronger implicit aggression the participants may have. Importantly, the data analysis process strictly followed the score assessment instruction of the CRT-A and all data collected from the CRT-A were used to assess participants' implicit aggression.

Saucier's mini-markers (1994), a brief version of the Big-5 measurement tool which has 40 items (e.g. creative, shy), was used to measure the explicit trait of personality. Respondents used a 5-point response scale that ranges from 1 (strongly disagree) to 5 (strongly agree) rate the extent to which each personality trait applies to them.

### **Measures of Leaders' Abusive Behaviors and Rudeness**

In the post-survey, the measure largely instructed participants to respond with how they perceived their leaders' behaviors. The picker and the placer responded to the following materials: 1) an assessment of leader's abusive supervision and 2) an assessment of leader's rudeness.

The subordinates (the picker and the placer) in the team task indicated the frequency with which their leader engaged in the abusive supervision during the team task through incidental abusive supervision scale (Johnson et al, 2012) and adapted abusive supervision items (Tepper, 2000). The incidental scale was chosen because it was designed to capture behavior which occurs in a relatively short and recent time frame (i.e., daily episodes as opposed to ongoing patterns of behavior). The six items (e.g. yelled or swore at a work group member) in the incidental abusive supervision scale (Johnson et al, 2012) were measured on a 6-point response scale that ranges from 1 (never) to 6 (five or more time). The abusive supervision items (Tepper, 2000) were nine statements such as "My leader ridicules me" and "My leader tells me my thoughts or feelings are stupid". Respondents reported the frequency through a 5-point response scale that ranges from 1 (I cannot remember) to 5 (very often).

I adapted a commonly-used four-item rudeness scale (Cortina et al., 2001) to measure the perception of rude behaviors initiated by the leader and occurring during the task itself. Sample items include "During the task, did you experience a situation where your leader put you down or was condescending to you?" and "During the task, did you experience a situation where your leader made demeaning or derogatory remarks about you?" Respondents

indicated the frequency by using a 4-point response scale that ranges from 1 (never) to 4 (often).

## RESULTS

### Descriptive Statistics

Table 1 shows means, standard deviations, correlations, and scale reliabilities among variables. The alphas for Tepper's abusive supervision, rudeness scale and interpersonal justice scale were above the cut-off point 0.7. However, the alphas for the CRT-A (both leader and follower) and Johnson's abusive supervision scale were lower than 0.7. Due to the nature and the unique coding system of CRT-A, it was not surprised to have a low alpha coefficient. A possible reason for low alpha of Johnson's abusive supervision scale is that the items in Johnson's abusive supervision represent distinct behaviors that comprise abusive supervision and the time limitation (twelve minutes) of team task was too short for all of the listed behaviors to occur. Also, we collected age information in ranges, the mean 4.24 falls in the ranger of 21 to 22 years old.

### Hypotheses Testing

My first hypothesis states that individuals who are high in implicit aggression will engage in a greater level of abusive supervision. To test this statement, I first examined the coefficient between leader's CRT-A score and mean value of Johnson abusive supervision scale (Johnson et al, 2012). I entered leader's CRT-A score as a sole independent variable. In the model 1 of the table 2,  $r(54) = .456, p < .001$ , supporting H1, the number showed a very strong positive relationship between leader's CRT-A score and abusive behavior. The coefficient of the simple slopes of leader's CRT-A score on the mean value of Johnson abusive supervision scale was positive and significant, providing preliminary support for H1.

My second hypothesis states that implicitly aggressive individuals will engage in a greater level of abusive supervision when they experience self-control resource depletion, but the relationship between implicitly aggressive and abusive supervision will be weaker when self-control resource depletion is not experienced. Unfortunately, I did not find anything to support this hypothesis. As table 2 indicates, in model 2,  $r(53) = .461$ ,  $p < 0.01$ , after entering the CRT-A score and condition as independent variables, I found that leader's CRT-A score was still the main predictor of abusive behavior. The coefficient of leader's CRT-A score on the mean value of Johnson abusive supervision scale was still positive and significant. This finding further supports the first hypothesis. However, the coefficient of the simple slopes of the condition was positive and not significant. In model 3, I added the interaction term of CRT-A and condition,  $r(52) = .471$ ,  $p = .447$ . However, the coefficients for all three independent variables in model 3 were positive and not significant. Overall, I did not find any support for H2, but found one more support for H1.

To further examine H1 and H2, I used the mean value of Tepper (2000) abusive items as the dependent variable. In the model 1 of table 3, I entered leader's CRT-A score and condition as independent variables,  $r(53) = .038$ ,  $p = 0.963$ . However, both of them were negatively and insignificantly related to the mean value of Tepper abusive items. In the model 2, I entered CRT-A score, condition and the interaction term of CRT-A and condition,  $r(52) = .049$ ,  $p = .823$ . The coefficient for the interaction term of CRT-A and condition was positive and not significant. Therefore, by testing Tepper abusive items, I did not find evidence for H1 and H2.

My third hypothesis states that Individuals who are high in implicit aggression will engage in a greater level of rudeness. Accordingly, I set the rudeness scale (Cortina et al., 2001) as the dependent variable. To examine this statement, I first entered the main effects of leader's CRT-A score and condition. In the model 1 of table 4,  $r(53) = .186$ ,  $p = .400$ , the coefficient of simple slope for leader's CRT-A score was positive and not significant. Besides, the coefficient of the simple slope for the condition was negative and not significant. In model 2,  $r(52) = .221$ ,  $p = .388$ , the coefficient for all three independent variable were still insignificant. Hence, I did not find any support for H3.

Andersson and Pearson (1999) interpreted rudeness as perceived incivility with ambiguous intentionality. Because of ambiguity, rudeness behavior can be very subjective and perception of Incivility may be determined by the receptor's individual differences such as personality. Besides, according to James (1998), people who are implicitly aggressive are likely to use one of the JMs, hostile attribution bias (the tendency to feel hostility and danger of others' behaviors), to justify their aggressive impulse. Hence, I inferred that followers who are high in the CRT-A score may be more likely to perceive leader's incivility because they have the tendency to perceive leader's hostility. In my study, I also tested how follower's implicit aggression influenced the perception of leader's rudeness behavior. In the model 1 of table 5,  $r(53) = .391$ ,  $p < .05$ , the coefficient for follower's CRT-A score to perceived leader's rudeness was positive and significant, when I entered both leader's and follower's CRT-A score. This coefficient was still strong, when I entered leader's and follower's CRT-A score plus interaction term of them in model 2,  $r(52) = .430$ ,  $p = .164$ . The figure supported that

followers who are high in implicit aggression may be more likely to view their leaders' behaviors as rudeness. Notably, I still cannot find support for H3 in table 5 because coefficients for Leader's CRT-A score in both models were positive and not significant.

Colquitt and his colleagues (2001) defined interpersonal justice as "the degree to which a personal is treated with politeness, dignity and respect" (p. 427). Hence, we can interpret interpersonal justice as a set of civility behaviors. Given that incivility may be subjective, civility can be subjective as well. James (1998) also stressed that people who are implicitly aggressive are likely to use one of the JMs, victimization by powerful others bias (the tendency to see inequity and exploitation in the behaviors of powerful others), to build the logical foundations for their rationalizations. Therefore, followers who are implicitly aggressive may be more likely to perceive leader's interpersonal injustice. In table 6, I used the interpersonal justice scale (Colquitt, 2001) as the dependent variable. Interestingly, from model 1 of table 6,  $r(53) = .338, p < .05$ , I found that the coefficient for follower's CRT-A score to perceived interpersonal justice was negative and significant. In model 1. The negative slope here means that implicit aggression was negatively associated with perceived interpersonal justice, such that those who are lower on dispositional aggression are more likely to perceive that they were treated with high levels of interpersonal justice. In model 2,  $r(52) = .352, p = .466$ , the coefficient for follower's CRT-A score was negative and marginally significant ( $b = -.416, p = .05$ ). Hence, my findings proposed that followers who are high in implicit aggression may be more likely to believe that they are disrespected by leaders.

Table 1. Descriptive Statistics

| Variable                                 | Mean  | s.d. | 1       | 2       | 3     | 4      | 5      | 6        | 7        | 8     | 9    |
|--|-------|------|---------|---------|-------|--------|--------|----------|----------|-------|------|
| 1 Conditionl Reasoning Test (Leader)     | -0.32 | 0.27 | (0.26)  |         |       |        |        |          |          |       |      |
| 2 Conditionl Reasoning Test (Follower)   | -0.34 | 0.22 | 0.19    | (0.11)  |       |        |        |          |          |       |      |
| 3 Self-control Resource Manipulation     | 1.64  | 0.48 | 0.79    | -0.15   |       |        |        |          |          |       |      |
| 4 Johnson's Abusive Supervision Scale    | 1.14  | 0.34 | 0.46 ** | 0.23    | 0.09  | (0.33) |        |          |          |       |      |
| 5 Tepper's Abusive Supervision Scale     | 1.56  | 0.49 | -0.03   | -0.02   | -0.02 | 0.05   | (0.99) |          |          |       |      |
| 6 Cortina's Rudeness Scale               | 1.13  | 0.41 | 0.18    | 0.38 ** | -0.04 | 0.21   | 0.03   | (0.85)   |          |       |      |
| 7 Colquitt's Interpersonal Justice Scale | 4.23  | 0.87 | -0.17   | -0.32 * | 0.23  | -0.14  | 0.01   | -0.38 ** | (0.94)   |       |      |
| 8 Gender                                 | 1.36  | 0.49 | -0.01   | -0.23   | -0.14 | 0.02   | 0.23   | -0.12    | 0.03     |       |      |
| 9 Race                                   | 2.11  | 1.62 | 0.27 *  | 0.35 ** | -0.09 | 0.33 * | -0.07  | 0.31 *   | -0.35 ** | -0.22 |      |
| 10 Age                                   | 4.24  | 0.92 | 0.07    | 0.09    | -0.05 | 0.15   | -0.01  | 0.07     | 0.03     | 0.14  | 0.16 |

Note. Cronbach's alpha appears along the diagonal in parentheses.

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

Table 2. Effect of Leader's Implicit Aggression on Abusive Supervision (Johnson's)

| Variable                         | Model 1   | Model 2 | Model 3 |
|----------------------------------|-----------|---------|---------|
| <i>Main</i>                      |           |         |         |
| Leader's CRT-A score             | 0.46 ***  | 0.45 ** | 0.14    |
| Condition                        |           | 0.07    | 0.19    |
| <i>Interaction</i>               |           |         |         |
| Leader's CRT-A score X Condition |           |         | 0.34    |
| Total $R^2$                      | 0.21      | 0.21    | 0.22    |
| Model $F$ Change                 | 13.93 *** | 7.03 ** | 0.59    |
| $\Delta R^2$                     |           | 0.01    | 0.01    |

Note. All entries are standardized regression coefficients.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

$n = 55$  participants

Table 3. Effect of Leader's Implicit Aggression on Abusive Supervision (Tepper's)

| <b>Variable</b>                     | <b>Model 1</b> | <b>Model 2</b> |
|-------------------------------------|----------------|----------------|
| <i>Main</i>                         |                |                |
| Leader's CRT-A score                | -0.03          | -0.14          |
| Condition                           | -0.02          | 0.02           |
| <i>Interaction</i>                  |                |                |
| Leader's CRT-A score X<br>Condition |                | 0.11           |
| Total $R^2$                         | 0.00           | 0.00           |
| Model $F$ Change                    | 0.04           | 0.05           |
| $\Delta R^2$                        |                | 0.00           |

Note. All entries are standardized regression coefficients.

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

$n = 55$  participants

Table 4. Effect of Leader's Implicit Aggression on Rudeness

| <b>Variable</b>                     | <b>Model 1</b> | <b>Model 2</b> |
|-------------------------------------|----------------|----------------|
| <i>Main</i>                         |                |                |
| Leader's CRT-A score                | 0.18           | -0.21          |
| Condition                           | -0.05          | 0.10           |
| <i>Interaction</i>                  |                |                |
| Leader's CRT-A score X<br>Condition |                | 0.43           |
| Total $R^2$                         | 0.04           | 0.05           |
| Model $F$ Change                    | 0.93           | 0.76           |
| $\Delta R^2$                        |                | 0.01           |

Note. All entries are standardized regression coefficients.

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

$n = 55$  participants

Table 5. Effect of Follower's Implicit Aggression on Rudeness

| <b>Variable</b>                               | <b>Model 1</b> | <b>Model 2</b> |
|---|----------------|----------------|
| <i>Main</i>                                   |                |                |
| Leader's CRT-A score                          | 0.11           | 0.37           |
| Follower's CRT-A score                        | 0.36 **        | 0.58 **        |
| <i>Interaction</i>                            |                |                |
| Leader's CRT-A score X Follower's CRT-A score |                | 0.41           |
| Total $R^2$                                   | 0.15           | 0.19           |
| Model $F$ Change                              | 4.70 *         | 1.99           |
| $\Delta R^2$                                  |                | 0.04           |

Note. All entries are standardized regression coefficients.

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

$n = 55$  participants

Table 6. Effect of Follower's Implicit Aggression on Interpersonal Justice

| <b>Variable</b>                               | <b>Model 1</b> | <b>Model 2</b> |
|---|----------------|----------------|
| <i>Main</i>                                   |                |                |
| Leader's CRT-A score                          | -0.12          | -0.25          |
| Follower's CRT-A score                        | -0.30 *        | -0.42          |
| <i>Interaction</i>                            |                |                |
| Leader's CRT-A score X Follower's CRT-A score |                | -0.22          |
| Total $R^2$                                   | 0.11           | 0.12           |
| Model $F$ Change                              | 3.36 *         | 0.54           |
| $\Delta R^2$                                  |                | 0.01           |

Note. All entries are standardized regression coefficients.

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

$n = 55$  participants

## DISCUSSION

My study explored whether leaders who are high in implicit aggression are more likely to treat their subordinates abusively or more likely to engage in rudeness. Additionally, I also examined whether leaders who are high in implicit aggression will engage in a greater level of abusive supervision when they experience self-control resource depletion. Supporting my first hypothesis, I found that leader's implicit aggression was positively and significantly related to abusive supervision for one measure of abusive supervision. Given that the team task only lasts twelve minutes, it is necessary to note that the Johnson (2012) abusive supervision scale is a more appropriate way to measure episodic behavior since it targets daily behavior. By contrast, Tepper's (2000) abusive supervision scale focuses on measuring on-going patterns of more severe behavior over longer time horizons and 12 minutes may be too short for a leader to engage in severe abusive behaviors.

Based on my data analysis results, abusive supervision may be mainly predicted by implicit aggression rather than the interaction of implicit aggression and self-control resource depletion. Also, contrary to my hypothesis, implicit aggression did not predict rude behavior. Surprisingly, I found that the follower's implicit aggression was positively and significantly related to the rating of the leader's rudeness behavior and negatively related to the rating of the leader's interpersonal justice. Although the analysis was conducted as an exploratory hypothesis, this finding has potential significant implications for organizational practices. One strength of the current study involves the introduction of a controlled laboratory task that allowed for the emergence of counter-productive supervisor behavior within a relatively short

amount of time, and which produced sufficient variance to allow prediction even with a relatively small sample. The team task maximized the potential for frustrating encounters and minimized the ability for supervisor perspective-taking. Accordingly, the task organically produced a meaningful variance in subordinate-rated abusive supervision and incivility within a short amount of time (12 minutes). Hence, the design of team task in my study can also be used in future research examining supervisor and subordinate-based predictors of negative workplace behavior.

Overall, I did not find evidence to support the additional two hypotheses. Although the coefficient for the interaction term of leader's CRT-A score and condition to abusive supervision was positive, it was not significant. Additionally, no data showed that the leader's CRT-A score was significantly related to leader's rudeness behaviors. Given the non-significant results of the second and third hypothesis, I must also consider the limitations of this study. First, I only tested 28 teams which only include 55 subordinates and 28 leaders, so the sample may have been too small to obtain significant study result. Remarkably, although using a small sample, I found significant clues to support my first hypothesis. Second, by using letter-E task, lab study had limited ability to deplete participants' resource. However, in the real workplace, countless sources can cause self-control resource depletion. Hence, although I did not find evidence to prove that condition matters through lab task, field research may better test the effect of interaction of CRT-A and condition to cause abusive supervision. Third, I realized that some leaders failed to understand the instruction of challenge version letter-E task and just did it by following the instruction of easy version.

Given that the total number of leader was only 28, even small errors would seriously affect the validity of data. Fourth, another limitation of this study was that many participants may already know each other before taking the lab section because I used only two instructors' students as the subject pool. This might decrease the possibility of abusive and rudeness behavior during team task because participants might try to control their impulse to maintain harmony among the team.

My current study shows significant implications for the direction of future research. First, as I described, a field study may be more appropriate to test the interaction term of implicit abusive and self-control resource depletion, because a great number of sources of depletion may exist in the workplace to reduce employee's self-control resources, and subordinates also have more chances to be exposed to leader's abusive behavior. As a result, the measure of abusive supervision in the workplace should be more accurate and effective, so a field approach should be applied. Second, because follower's implicit aggression may lead to biases in rating ambiguous behaviors of the leader, future studies can further explore whether and how follower's implicit aggression will affect the subjective evaluation of a leader's behavior. Third, future studies can examine that whether the abusive supervision is more likely to occur when both leader and follower are high in implicit aggression.

## CONCLUSION

In this study, I conducted an online survey, a laboratory study and a post survey and found evidence to support the notion that implicit aggression can predict workplace behavior and demonstrated that leader's implicit aggression increases the likelihood of abusive supervision. Additionally, I also found that subordinate's implicit aggression may influence the degree to which they perceive rudeness and injustice in their leader's behavior, making subordinates who are high in CRT-A score more likely to underrate their leader's civility.

If my results are replicated and generalizable, they have significant implications for organizational practices. First of all, the CRT-A may be a good tool to improve hiring and promotion processes. By using the CRT-A to know that certain candidates are dispositionally implicitly aggressive, we can prevent from assigning or promoting them to the job positions that discourage them from being abusive. Additionally, leaders can use the CRT-A to self-evaluate and if they notice that they have the potential for engaging in abusive behavior, they can pay more attention to their impulse and try to control their abusive behavior. Third, in many organizations, rating from subordinates plays an important role in leader's performance evaluation which directly links to leader's chance of promotion. I found that subordinates' dispositional implicit aggression may influence their subjective evaluations of their leader's behavior. Hence, if organizations are serious about the fair treatment of managers/leaders, they need to treat subordinate rating differently. Specifically, the final evaluations made by subordinates need to be adjusted according to subordinates' CRT-A scores. In general, linking implicit measures to workplace behavior is a very new topic in this

field and it is worthy to explore further. Given that the data is on the right trend, I will continue to collect data by implementing lab study as well as examine our hypothesis through field study.

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**APPENDIX**

#### Incidental abusive supervision scale (Johnson et al, 2012)

Using the scale provided below, please indicate the frequency with which your leader engaged in the following behaviors during the magnet activity:

1. Started an argument with a work group member
2. Made fun of a work group member
3. Ignored a work group member
4. Yelled or swore at a work group member
5. Behaved in a nasty or rude manner to a work group member

#### Abusive Supervision Items (Tepper 2000)

The items were:

1. Ridicules me
2. Tells me my thoughts or feelings are stupid
3. Gives me the silent treatment
4. Puts me down in front of others
5. Blames me to save himself/herself embarrassment
6. Makes negative comments about me to others
7. Is rude to me
8. Does not allow me to interact with my coworkers
9. Tells me I'm incompetent

#### Rudeness scale (Cortina et al., 2001)

During the task, did you experience a situation where your leader:

1. Put you down or was condescending to you?
2. Paid little attention to your statement or showed little interest in your opinion?
3. Made demeaning or derogatory remarks about you?
4. Addressed you in unprofessional terms, either publicly or privately?

#### Interpersonal justice (Colquitt, 2001)

Consider the behavior of your leader during the magnet task. To what extent:

1. Has he/she treated you in a polite manner?
2. Has he/she treated you with dignity?
3. Has he/she treated you with respect?
4. Has he/she refrained from improper remarks and comments?