

ABSTRACT

Title of dissertation: BEHAVIORAL OUTCOMES OF INTERPERSONAL
 AGGRESSION AT WORK: A MEDIATED AND
 MODERATED MODEL

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Interpersonal aggression at work is abundant, yet despite the importance of this topic for employees' well being, systematic research on aggression in organizational settings is only beginning to accumulate, and research on outcomes experienced by targets of aggression is limited. The purpose of this dissertation was to extend the workplace aggression literature by proposing and testing a more comprehensive model of behavioral outcomes associated with interpersonal aggression – i.e., counterproductive work behaviors (CWBs), organizational citizenship behaviors (OCBs), job search behaviors, and work-family conflict. Furthermore, I examined two cognitive and emotional mediators of the relationship between experiencing interpersonal aggression and behavioral outcomes (i.e., interpersonal justice and negative affect at work), as well as several moderators including job characteristics (i.e., job autonomy, job mobility), target characteristics (i.e., dispositional hostility, neuroticism), and perpetrator characteristics (i.e., perpetrator status). The hypotheses were tested through established survey measures administered to a representative sample of 728 working adults who were

diverse with regard to their jobs, occupations, and industries among other factors. The results revealed that the frequency of interpersonal aggression experiences was significantly related to enacting high levels of CWBs aimed at both the organization and at other individuals, and also related to high levels of job search behaviors. Interpersonal aggression experiences were also associated with perceptions of interpersonal injustice and negative affect at work, but there was no evidence for these psychological processes mediating interpersonal aggression's relationships with the behavioral outcomes. The results also revealed moderation effects for job autonomy, job mobility, dispositional hostility and neuroticism, yet moderated SEM results failed to provide evidence for differential relationships in the model based upon whether the perpetrator of the aggression was one's supervisor or a coworker. Implications for research and theory, future directions, and implications for organizations are provided.

BEHAVIORAL OUTCOMES OF INTERPERSONAL AGGRESSION AT WORK:
A MEDIATED AND MODERATED MODEL

By

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CHAPTER 1 – INTRODUCTION, THEORETICAL RATIONALE & DEFINITIONS

Workplace aggression is not a new phenomenon, yet it has captured the attention of the U.S. public over the last decade due to extensive media coverage of homicides enacted by disgruntled employees (Bulatao & VandenBos, 1996). This increased public awareness of aggression at work has been met with increased attention to this problem among organizational researchers (Gill, Fisher, & Bowie, 2002; Neuman & Baron, 1998; VandenBos & Bulatao, 1996). Contrary to portrayals by the media, research has demonstrated that aggression enacted by employees in the workplace is typically much less severe, and includes a wide range of behaviors that are intended to harm others, including yelling at someone, spreading rumors, obscene gestures, making threats, withholding information, and giving dirty looks (Baron & Richardson, 1994; Neuman & Baron, 1996). Indeed, aggression in the workplace is quite common. Glomb (2001) found that 60% to 70% of employees across three organizations had experienced mild forms of aggression at work, and 6% of the sample had been physically assaulted at work.

While research and theory have begun to illuminate the nature and prevalence of aggressive acts at work (Glomb, Steel & Arvey, 2002), there are several critical issues that have not yet been adequately addressed. First, much of the theory on aggression has been aimed at understanding the psychological processes and behaviors involved within a *single episode* of aggression, rather than addressing interpersonal aggression as an organizational stressor that can occur over a period of time in the work context. An exclusive focus upon single episodes of aggression fails to help scholars understand how targets might be negatively impacted by regularly experiencing interpersonally

aggressive acts at work. Second, while accumulating research evidence suggests that interpersonal aggression is related to negative psychological outcomes (Mikkelsen & Einarsen, 2001; Zapf, Knorz & Kulla, 1996; Zapf, 1999), health outcomes (Cortina, Magley, Williams & Langhout, 2001; Duffy, Ganster & Pagon, 2002), and negative job attitudes (Ashforth, 1997; Einarsen, Rayknes & Matthiesen, 1994; Keashly, Trott & MacLean, 1994; Keashly & Jagatic, 2003; Tepper, 2000) for targets, we know surprisingly little about *behavioral outcomes* associated with interpersonal aggression. Research on organizational stressors suggests that they have psychological, health *and* behavioral outcomes (Kahn & Byosiere, 1992), and to neglect the study of behaviors associated with interpersonal aggression is to neglect a fundamental set of outcomes that can have important implications for organizations. Third, there has been a notable absence of *comprehensive theoretical models* devoted to understanding how targets' outcomes are related to interpersonal aggression at work, and to my knowledge, no published studies have empirically evaluated such a model. Existing interpersonal aggression research has been devoted to assessing incidence rates (e.g., Zapf, Einarsen, Hoel & Vartia, 2003), examining a handful of outcomes (e.g., Ashforth, 1997; Cortina et al., 2001; Duffy et al., 2002; Keashly et al., 1994), or at best, proposing a mediator (e.g., Tepper, 2000; Zellars, Tepper, & Duffy, 2002). Fourth, there has been little discussion of *mediators* that may explain why interpersonal aggression leads to negative outcomes for targets, and there has been virtually no attention to *moderators* that may either accentuate or attenuate the effects of interpersonal aggression. It is essential that future research on interpersonal aggression address these omissions by proposing and testing theoretical models that help scholars understand the range of outcomes associated with experiencing

interpersonal aggression at work, and how these relationships may be mediated by psychological processes and moderated by job and situational characteristics.

The purpose of this dissertation was to address these omissions in the workplace aggression literature by advancing and testing a more comprehensive model of behavioral outcomes associated with interpersonal aggression. More specifically, I proposed and tested a model of interpersonal aggression in which aggression is conceptualized as an organizational stressor (Kahn & Byosiere, 1992) associated with a range of behavioral outcomes including Counterproductive Work Behaviors (CWBs; Fox, Spector & Miles, 2001), Organizational Citizenship Behaviors (OCBs; Organ, 1988), job search behaviors (Blau, 1994), and negative spillover to the family context in the form of increased work-family conflict (Netemeyer, Boles & McMurrian, 1996). I further proposed that the relationship between aggression and behavioral outcomes would be mediated by cognitive and affective psychological processes (i.e., negative affect, interpersonal justice), and moderated by job characteristics (i.e., job autonomy, job mobility), target characteristics (i.e., dispositional hostility, neuroticism), and perpetrator characteristics (i.e., status of perpetrator). To test the hypotheses derived from this model, I conducted a field study that utilized survey methodology to assess the experiences of a broad sample of working adults.

This dissertation is divided into five chapters. In this first chapter, I continue with a definition of interpersonal aggression at work, and elaborate upon characteristics of the definition that inform my approach to this research. I then discuss the distinctions between interpersonal aggression at work and several similar constructs in the organizational literature that have recently been proposed to capture the “dark side” of

organizational behavior. Second, I present the theoretical model that was tested in the current research, elaborate upon each of the proposed linkages, and provide hypotheses. The third chapter details the survey methodology that was employed to assess the experiences of employees across numerous different organizations, occupations and backgrounds. The analytic procedures and results are presented in a fourth chapter. Finally, I provide a discussion of the findings from this research, including theoretical and practical implications, limitations, and future directions.

Defining Interpersonal Aggression at Work

Research on aggression has a long history within social psychology (Dollard, Doob, Miller, Mowrer, & Sears, 1939) where *aggression* has been defined as “any behavior directed at another individual that is carried out with the proximate (immediate) intent to cause harm” (Anderson & Bushman, 2002, p. 28). In the organizational literature, some existing definitions of aggression have maintained the social psychological focus upon actors engaging in aggression, and have thus defined aggression from the perspective of the actor exclusively (e.g., Neuman & Baron, 1996). However, at work, employees may be subjected to a variety of aggressive acts on a regular basis (Hoel, Rayner & Cooper, 1999; Keashly & Harvey, forthcoming; Neuman & Keashly, 2003a), and as such, it is particularly important for scholars to investigate the target’s perspective and understand the impact of this organizational stressor on targets’ emotional, cognitive, and behavioral outcomes. Other existing definitions of related organizational constructs have focused upon a narrow range of low-severity behaviors (e.g., Cortina et al., 2001; Duffy et al., 2002), behaviors performed by supervisors only (e.g., Tepper, 2000), or behaviors that are extremely persistent and long-term (i.e., “bullying”; Leymann, 1996). Exclusively

utilizing narrow construct definitions fails to recognize that many employees experience a wide range of aggressive acts that vary in severity and frequency (Glomb, 2001; Namie & Namie, 2000) and that both supervisors *and* coworkers may engage in aggressive acts (Davenport, Schwartz & Elliott, 2002; Neuman & Keashly, 2003a; Salin, 2001). To my knowledge, there are no existing definitions that adopt the perspective of the target *and* consider aggression to be a broad construct that includes a wide variety of negative acts (ranging from minor to severe) that can be perpetrated by any organizational member and can occur with varying frequencies. Thus, I offer such a definition below, and then delineate the essential characteristics of this definition in the paragraphs that follow:

Interpersonal Aggression at Work: Negative acts perpetrated by an organizational member that are experienced by another organizational member who is the target of these acts.

Negative Acts: The Types of Behaviors that Constitute Interpersonal Aggression

Buss's (1961) framework of types of aggressive acts has frequently been employed by organizational scholars to describe the behaviors that constitute interpersonal aggression. More specifically, Buss (1961) described three bipolar dimensions of aggression: 1) physical vs. verbal, 2) active vs. passive, and 3) direct vs. indirect. With *physical* forms of aggression, harm is inflicted with physical action, and includes behaviors such as glaring at someone, making obscene gestures, assault, destroying someone's personal property, and delaying action to make another person look bad.¹ *Verbal* aggression is inflicted through words as opposed to deeds, and includes verbal behaviors such as threats, insults, spreading rumors, and giving someone the "silent treatment." *Active* forms of aggression inflict harm through the performance of some

behavior, whereas *passive* forms of aggression are accomplished through the withholding of some behavior. Examples of active aggression include yelling at someone, lying to others to hurt someone's reputation, making obscene gestures, and deliberately assigning work overload. Examples of passive aggression include withholding needed information, not responding to requests, refusing to provide resources, and slowing down work to make someone look bad. Finally, in *direct* forms of aggression, the perpetrator delivers harm directly to the target. Examples include reprimanding someone too harshly, insulting one's competence directly to one's face, and being glared at. In contrast, *indirect* forms of aggression are delivered through an intermediary such as another person or something that the target values (e.g., job tasks, salary, time). Examples of indirect forms of aggression include spreading lies or rumors, failing to support the target's ideas or contributions, deliberately assigning work overload, and assigning the target to a physically undesirable or unsafe location.

Organizational Members as Perpetrators and Targets

I focus upon interpersonal aggression perpetrated by any organizational member aimed at any other organizational member(s). My interpersonal focus is consistent with the foundational work on aggression in social psychology, which has defined aggression as interpersonal in nature (Buss, 1961; Berkowitz, 1962), rather than being aimed at social institutions such as the organization as a whole. My focus upon behaviors that occur within the boundaries of the organization are consistent with most research on aggression at work, which has examined interpersonal aggression perpetrated by organizational insiders and aimed at organizational insiders (Glomb et al., 2002; Neuman & Baron, 1996, 1998; O'Leary-Kelly, Duffy & Griffin, 2000; Robinson & Greenberg, 1998).

Research has shown that aggression and violence from organizational outsiders is typically related to employment in high-risk occupations (e.g., taxi drivers, gas station attendants, police officers), rather than features of the organizational context (Baron & Neuman, 1996; Bulatao & VandenBos, 1996), and to my knowledge, the factors underlying aggression towards customers or clients have not yet been addressed. In addition, my conceptualization includes interpersonal aggression perpetrated by *any* organizational member, not only by supervisors. While some interpersonal aggression constructs have been developed to assess *only* instances of supervisory aggression (e.g., abusive supervision, petty tyranny; Ashforth, 1994; Bies & Tripp, 1998; Tepper, 2000), such a limitation does not reflect the fact that coworkers may also be very potent sources of stress and strain in the workplace (Einarsen et al., 1994; Hoel et al., 1999; Leymann, 1996; Zapf et al., 1996).

From the Target's Perspective

As mentioned above, I am interested in interpersonal aggression as an organizational stressor and as such, one essential characteristic of my definition is that it considers the experience of aggression from the *target's* point of view. Nearly all definitions of aggression are based upon the actor's point of view, and such actor-based definitions typically necessitate that the actor intend the target harm in order for the actions to be considered aggression (e.g., Anderson & Bushman, 2002; Neuman and Baron, 1996). However, when targets experience aggression, it is not possible for them to definitively say whether the actor intended to cause them harm or not, thus such a requirement is not possible from this vantage point. As such, my definition does not include an actor's intent to harm. While such a distinction between the actor and the target's perspective in

defining aggression seems essential, scholars studying targets' experiences of workplace aggression have frequently utilized a definition of aggression (Neuman & Baron, 1996) that stresses the actor's perspective, even when they have adopted the perspective of the target in their own research (e.g., Glomb, 2001, 2002; Glomb & Liao, 2003; Neuman & Keashly, 2003a).

Summary

In summary, I have drawn from the social psychological and organizational literatures to identify several important defining features of interpersonal aggression at work. The defining characteristics I adopt in this dissertation include: a broad range of negative acts, perpetrated by any organizational member, experienced by any organizational member, and examined from the target's perspective. Now that I have defined the focal construct, I next differentiate this construct from other similar constructs in the organizational literature.

Distinguishing Interpersonal Aggression at Work from Related Constructs

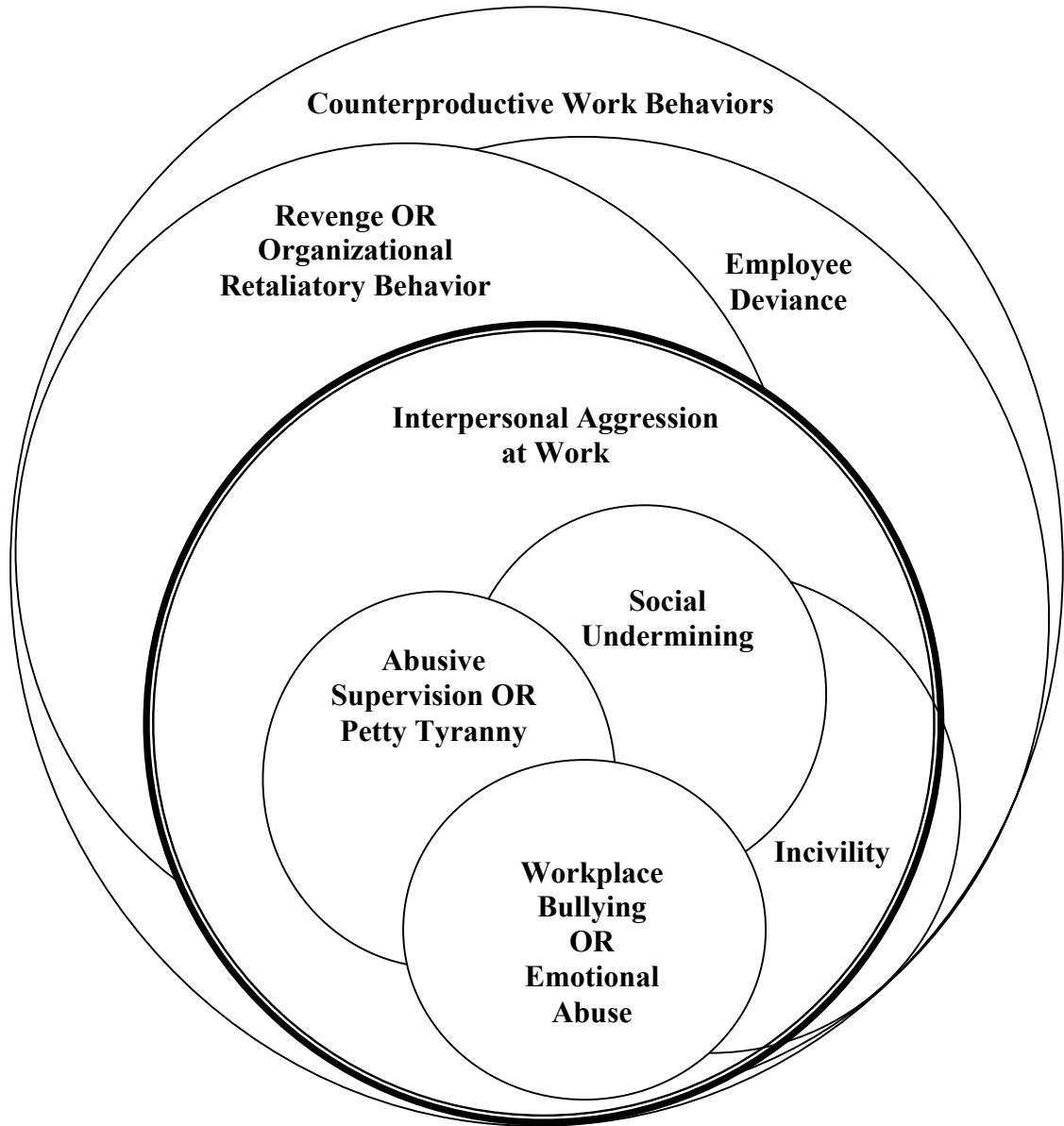
Over the past decade, interest among organizational scientists in the "dark side" of the workplace has flourished. While individual behaviors such as theft (Greenberg, 1990a, 2002), sabotage (Giacalone, Riordan, & Rosenfeld, 1996), and whistle-blowing (Miceli & Near, 1996) have been the target of investigation for some time, several scholars recognized that negative workplace behaviors often co-occur and as such, a broader typology of negative workplace behaviors permits researchers to examine the numerous different ways in which employees "act out" in the workplace. Unfortunately, there is no agreement about the preferred typology of negative workplace behaviors, and given the fact that research is being conducted on overlapping sets of behaviors but with different

names and definitions, there is much confusion in this literature. Reviews of the construct domain have been offered (Robinson & Greenberg, 1998; O’Leary-Kelly et al., 2000; Spector & Fox, forthcoming), yet these reviews differ in their coverage of constructs and in their conclusions.

The precise delineation of the relationship between my focal construct and related constructs is important, particularly given the proliferation of “dark side of the workplace” constructs in recent years, many of which have not been adequately defined. In the following paragraphs, I review various constructs that are related to interpersonal aggression at work, and indicate the ways in which they differ. A summary of this discussion can be seen in Figure 1, which is a Venn diagram that portrays the overlapping and distinct aspects of these constructs and their relationship with interpersonal aggression at work. As can be seen in this Figure, interpersonal aggression at work is neither an all-encompassing “broad definition” construct (O’Leary-Kelly et al., 2000) that describes all forms of negative behaviors at work, nor is it a highly specific “precise definition” construct (O’Leary-Kelly et al., 2000) aimed at covering only specific behaviors enacted by particular perpetrators. Interpersonal aggression can be considered to have an intermediary level of specificity; as it is encompassed by broader constructs such as counterproductive work behaviors (Fox et al., 2001), yet it also encompasses more precise constructs such as social undermining (Duffy et al., 2002), abusive supervision (Tepper, 2000), and workplace bullying or emotional abuse (Keashly, 1998; Keashly et al., 1994; Leymann, 1996). This review is structured such that I first review the constructs that are broader than interpersonal aggression at work, and then review the constructs that are more narrowly defined than interpersonal aggression at work.

Figure 1

Relationship between Interpersonal Aggression and
Other Constructs Reflecting Negative Acts at Work



Constructs Broader than Interpersonal Aggression

Counterproductive Work Behaviors encompass the vast majority of particular forms of mistreatment and negative acts at work that have been studied. CWBs are defined as “volitional acts that harm or intend to harm organizations and their stakeholders (e.g., clients, coworkers, customers, and supervisors)” (Spector & Fox, forthcoming, p. 2). CWBs may be aimed at the organization (*CWB-O*) or they may be aimed at individuals in the organization (*CWB-I*) (Fox et al., 2001). *CWB-I* is essentially interpersonal aggression at work (with the minor exception that CWBs can be aimed at stakeholders outside the organization such as customers), thus my focal construct comprises half of this larger domain of behaviors. *CWB-O* can be conceptualized as aggression aimed at the organization as a whole. Thus, I employ the term CWB to refer to the full spectrum of volitional acts perpetrated by organizational members that harm or intend to harm organizations and their stakeholders, and I use the term interpersonal aggression at work to refer to only those CWBs that are interpersonal in nature and are directed at an organizational member.

Employee Deviance is defined as “voluntary behavior that violates significant organizational norms and in doing so threatens the well-being of an organization, its members, or both” (Robinson & Bennett, 1995, p. 556). Employee deviance is conducted by organizational members, and it can be directed at other individuals in the organization (i.e., interpersonal deviance) or towards the organization (i.e., organizational deviance; Bennett & Robinson, 2000). According to this definition, deviant behaviors are CWBs, yet not all CWBs are deviant. Because the behaviors must violate organizational norms to be considered deviant, CWBs that are consistent with norms in the organization are not

deviant (e.g., when it is normative to yell at other employees in an organization, this behavior does not constitute employee deviance). While conceptually, CWBs and deviance may be distinct, nevertheless, the distinction has not been made in the measurement of deviance. For example, in Bennett and Robinson's (2000) measure of employee deviance, items are CWBs with no mention of norm violation. While interpersonally aggressive behaviors will violate norms in most organizational contexts, I expected that there would be organizational environments in which interpersonal mistreatment is condoned and/or encouraged (c.f., Robinson & O'Leary-Kelly, 1998). Thus, while most instances of interpersonal aggression at work will be employee deviance, interpersonal aggression is not completely encompassed by employee deviance.

Revenge and *Organizational Retaliatory Behaviors (ORBs)* are similar constructs that require that the behaviors be preceded by a perceived harm, wrongdoing, or unfair treatment. Revenge is defined as "an action in response to some perceived harm or wrongdoing by another party that is intended to inflict damage, injury, discomfort, or punishment on the party judged responsible" (Aquino, Tripp & Bies, 2001, p. 53). ORBs are defined as "behavioral responses of disgruntled employees to perceived unfair treatment" (Skarlicki, Folger, & Tesluk, 1999, p. 100). These constructs can be aimed at individuals or the organization as a whole, yet they require that the actor be motivated to restore equity or justice, so they are narrower than CWB, which does not require any particular motive. While some interpersonally aggressive acts may be motivated by a perceived harm or injustice, this is not required. Thus, interpersonal aggression overlaps with revenge and ORBs, yet they are clearly distinct constructs.

Constructs More Specific than Interpersonal Aggression

The broad constructs discussed above have been studied from the perspective of the actor, rather than that of the target. Research on those topics has been aimed at understanding the factors that lead employees to enact these negative behaviors (i.e., CWBs, ORBs, revenge, deviance) rather than understanding targets' reactions to experiencing these behaviors. In contrast, the constructs discussed below have been approached from the target's perspective. The behaviors included in the review below are all conceptually overlapping with interpersonal aggression, and thus research on these constructs was used to inform the review of previous research and development of hypotheses.

Workplace incivility has been defined as “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others” (Andersson & Pearson, 1999, p. 457). This definition requires that incivility violate workplace norms, and since it is a subset of employee deviance, it is not completely encompassed by interpersonal aggression because interpersonal aggression does not require that norms be violated. However, most of the behaviors that comprise incivility are mild forms of interpersonal aggression (e.g., being ignored, being the target of condescending remarks, being addressed unprofessionally) and severe affronts such as yelling and physical assault are excluded.

Social Undermining has been defined as “behaviors intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships work-related success, and favorable reputation” (Duffy et al., 2002, p. 332). The behaviors reflected in this

construct are very similar to the low-severity behaviors enacted by organizational members in workplace incivility, and this construct also explicitly excludes affronts such as yelling and physical assault. Unlike incivility, Duffy et al. (2002) require that the target perceive the behaviors to be intentionally harmful, and without this requirement, they are not considered undermining. As seen in Figure 1, social undermining is completely encompassed by interpersonal aggression at work, yet the constructs are not synonymous because social undermining only reflects behaviors at the less severe end of the spectrum. It leaves out, for example behaviors such as physical assault and defacing another person's property.

Abusive Supervision and *Petty Tyranny* are similar in that they both reflect negative behaviors as perpetrated by supervisors or managers only. Abusive supervision has been 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). A petty tyrant has been vaguely defined as “someone who lords their power over others” (Ashforth, 1997). Both of these constructs exclude severe forms of interpersonal aggression such as physical abuse, and in this regard, they overlap a great deal with social undermining and incivility in the actual behaviors enacted, yet supervisors or leaders in the organization must perpetrate these behaviors. Abusive supervision and petty tyranny are both interpersonal aggression, and thus they are completely encompassed in this broader construct.

Workplace Bullying has a rich body of research in Europe (Leymann, 1996; Einarsen et al., 1994; Hoel, Cooper & Faragher, 2001; Zapf et al., 1996), and while there has been some attention to bullying in the U.S. (Namie & Namie, 2000), scholars in the U.S. have

typically labeled this form of behavior *emotional abuse* (Keashly, 1998; Keashly et al., 1994; Keashly & Jagatic, 2003). Bullying has been defined with the following description: “A person is bullied ...when he or she feels repeatedly subjected to negative acts in the workplace, acts that the victim may find it difficult to defend themselves against” (Einarsen et al., 1994, p. 383). Emotional abuse has been defined as “repeated hostile verbal and nonverbal behaviors (excluding physical contact) directed at one or more persons over a period of time such that the target’s sense of self as a competent worker and person is negatively affected” (Keashly & Harvey, forthcoming, p. 6). While these two constructs are almost entirely overlapping and have even been equated in a recent review (Keashly & Jagatic, 2003), one distinction between them is that emotional abuse specifically excludes physical contact whereas workplace bullying does not. Both of these constructs emphasize experiencing frequent negative acts over an extended period of time, thus bullying (or emotional abuse) reflects the high end of frequency on a scale of interpersonal aggression, and could be termed persistent interpersonal aggression. Frequency and duration requirements for the negative acts to be considered bullying are frequently cited as at least weekly over at least a six-month period (Leymann, 1996), yet scholars disagree and often use different indicators of persistence (Hoel et al., 1999). Given that the behaviors enacted in workplace bullying and interpersonal aggression are the same, that there are no clear guidelines for deciding at what frequency or over what period of time the construct of interpersonal aggression transforms itself into bullying, and that measures of interpersonal aggression at work (e.g., Glomb, 2001; Neuman & Keashly, 2003b) are almost identical to those that purportedly assess bullying at work (e.g., Einarsen & Hoel, 2001, as cited in Salin, 2001;

Leymann, 1993, as cited in Davenport et al., 2002), I consider bullying to be a special case of interpersonal aggression at work in which the aggressive acts are persistent (experienced very frequently over a long period of time).

Finally, while Figure 1 does not include behaviors with clear sexual or ethnic content (e.g., sexual harassment or ethnic harassment) or other discriminatory behaviors aimed at personal characteristics (e.g., age, sexual orientation, disability, national origin), several scholars have recognized that such behaviors are counterproductive or aggressive, and thus should be considered within typologies such as those described above (Bell, Quick & Cychota, 2002; Neuman & Baron, 1998; Keashly & Jagatic, 2003). However, discriminatory behaviors may be motivated by factors outside the organization such as societal norms or perpetrators' prejudices (Ibarra, 1993). Thus, such behaviors are not entirely overlapping with definitions of even the broadest typologies (e.g., CWBs), which suggests that they warrant being investigated as having distinct antecedents and consequences from other aggressive acts. In this dissertation, I focused specifically upon instances of aggression that are general in nature and can be aimed at any organizational member, rather than specifically being aimed at people with personal characteristics protected by Title VII of the U.S. Civil Rights Act, the Americans with Disabilities Act, or the Age Discrimination Acts.

Summary

In the preceding sections, I defined interpersonal aggression at work as negative acts perpetrated by an organizational member that are experienced by another organizational member who is the target of these acts. I then differentiated this construct from related constructs in the organizational literature including counterproductive work behaviors,

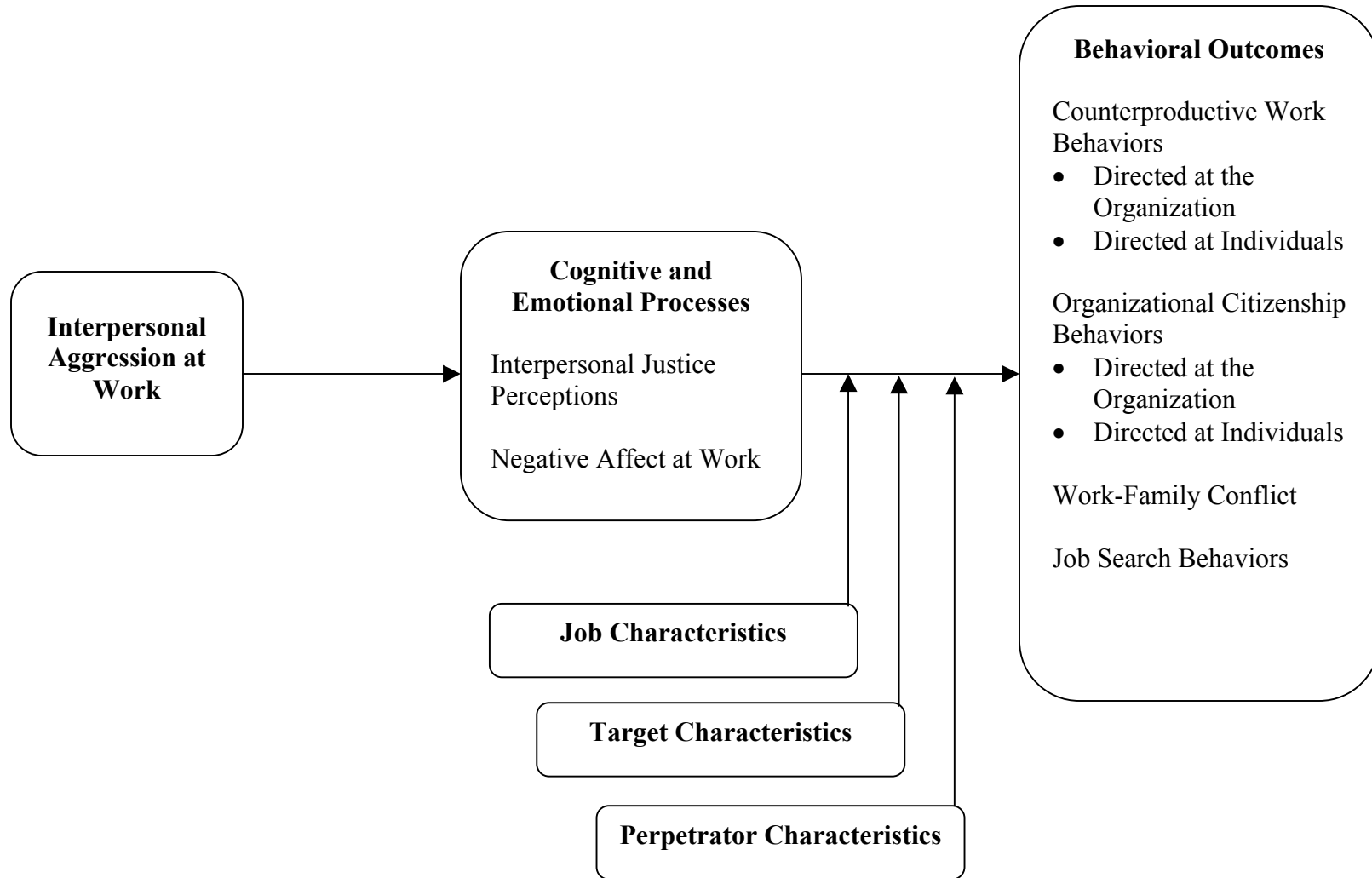
employee deviance, revenge, organizational retaliatory behaviors, incivility, social undermining, abusive supervision, petty tyranny, workplace bullying and emotional abuse. Interpersonal aggression at work is of intermediary specificity, such that several more precise constructs are comprised within it (e.g., abusive supervision, social undermining, workplace bullying), yet it is itself part of broader constructs that consider negative acts aimed at both individuals and the organization as a whole (e.g., counterproductive work behaviors). Now that the precise definition of the construct and its relationship to related constructs has been specified in detail, I turn to the model that was investigated in the current research.

CHAPTER 2 -- PROPOSED MODEL OF BEHAVIORAL OUTCOMES ASSOCIATED WITH INTERPERSONAL AGGRESSION AT WORK

The purpose of the current research was to advance and test a theoretical model of behavioral outcomes associated with experiencing interpersonal aggression at work, including an examination of mediators and moderators of these relationships. In this dissertation, I drew from a large body of theory and research across diverse areas such as counterproductive work behaviors, organizational justice, work-related affect, work-family conflict, and organizational citizenship behaviors, to develop the theoretical model shown in Figure 2. Figure 2 illustrates that frequently experiencing interpersonal aggression at work is associated with behavioral outcomes including high levels of CWBs, low levels of OCBs, spillover in the form of work-family conflict, and job search behaviors, as mediated by cognitive and emotional processes (i.e., negative affect, interpersonal justice). Furthermore, I argued that relationships with behavioral outcomes would be moderated by job characteristics, target characteristics, and perpetrator characteristics. A model such as that seen in Figure 2 is an important advance in the aggression literature because existing research has focused primarily upon assessing incidence rates or examining a few psychological and health outcomes. Research has recently become a bit more complex with an investigation of justice perceptions as a mediator (Tepper, 2000) and targets' personality and roles as moderators (Tepper, Duffy & Shaw., 2001; Zellars et al., 2002) of the relationship between abusive supervision and outcomes. However, attention to behavioral outcomes has been scant, and such a broad theoretical model of interpersonal aggression, associated psychological processes, outcomes, and moderators of these relationships has not yet been proposed and tested.

Figure 2

Proposed Model of the Relationships between Interpersonal Aggression at Work and Behavioral Outcomes



It is important to note that the model in Figure 2 is grounded within the literature on organizational stress. Much of the theorizing on interpersonal aggression, both within the social psychological tradition (e.g., Anderson & Bushman, 2002) and within the organizational literature (e.g., Glomb, 2002; Glomb et al., 2002; Neuman & Baron, 1996), has been aimed at understanding the processes involved within a *single episode* of aggression. Yet in contrast to this episodic perspective, research has consistently shown that many employees experience aggressive acts on a regular basis at work (Einarsen, Hoel, Zapf & Cooper, 2003), and thus an exclusive focus upon single episodes will not fully capture the nature of employees' experiences. I argue that it is most appropriate to consider interpersonal aggression at work as a stressor experienced by many employees. *Organizational stressors* have been defined as antecedent conditions within one's job or the organization that requires adaptive responses on the part of an employee (Beehr & Newman, 1978). When an individual perceives interpersonal aggression as a stressor, he or she experiences *stress*, negative physiological and psychological responses to the perceived aggression (Matteson & Ivancevich, 1987). Repeated exposure to this stressor can result in *strain*, an outcome of the job stress process that can be psychological, physical, or behavioral in nature (Jex & Beehr, 1991; Kahn & Byosiere 1992). While it is possible for a single episode of aggression to negatively impact an employee, it is most often the case that interpersonal aggression acts like other organizational stressors, in that minor annoyances become increasingly problematic as they are experienced more frequently across time (Kahn & Byosiere, 1992). As such, targets' reports of the *frequency* of experiencing interpersonally aggressive acts are indicators of their level of exposure to this stressor.

In the following sections, I discuss each of the components of the model presented in Figure 2 in detail, including the advancement of hypotheses that were tested in the current research. This discussion is organized according to three main guiding research questions: 1) What *behavioral outcomes* are associated with being the target of interpersonal aggression at work? 2) What *psychological processes* mediate the relationship between interpersonal aggression and behavioral outcomes? and 3) What *job characteristics, target characteristics, and perpetrator characteristics* moderate the relationship between interpersonal aggression and behavioral outcomes?

What behavioral outcomes are associated with being the target of interpersonal aggression at work?

Existing research has established that frequently experiencing interpersonal aggression at work is associated with psychological outcomes, physiological outcomes, and negative job attitudes. More specifically, several studies have linked interpersonal aggression at work to psychological outcomes including depression (Tepper, 2000), anxiety (Keashly et al., 1994; Tepper, 2000), stress and frustration (Ashforth, 1997), low self-esteem (Ashforth 1997; Vartia, 1996), feelings of helplessness and frustration (Ashforth, 1997), emotional exhaustion (Tepper, 2000), poor general psychological well-being (Cortina et al., 2001; Mikkelsen & Einarsen, 2001; Zapf et al., 1996), and low life satisfaction (Tepper, 2000). Regarding physiological outcomes, research has found that interpersonal aggression is related to somatic complaints (Duffy et al., 2002; Mikkelsen & Einarsen, 2001), and low overall health satisfaction (Cortina et al., 2001). Negative job attitudes associated with interpersonal aggression include low job satisfaction (Cortina et al., 2001; Keashly et al., 1994; Tepper, 2000), low commitment to the

organization (Ashforth, 1997; Duffy et al., 2002; Tepper, 2000), perceptions of injustice (Tepper, 2000; Zellars et al., 2002), and low job involvement (Ashforth, 1997).

This research over the past decade has taught us much about targets' outcomes associated with interpersonal aggression, yet we know much less about behavioral outcomes than we do about psychological or physical outcomes. Research on behavioral outcomes of interpersonal aggression has focused primarily upon turnover intentions, and has established that targets of aggression report greater intentions to leave the organization (Ashforth, 1997; Cortina et al., 2001; Keashly et al., 1994; Keashly, Harvey & Hunter, 1997; Leymann, 1996; Rayner & Hoel, 1997; Tepper, 2000). Additional research is needed to understand the relationship between interpersonal aggression and a broader range of behavioral outcomes. As seen in Figure 2, I examined a range of behavioral outcomes in this research in order to expand the focus beyond psychological and physiological strain, and to fill this important gap in the literature.

In this dissertation, I have chosen to examine Counterproductive Work Behaviors (CWBs), Organizational Citizenship Behaviors (OCBs), work-family conflict, and job search behaviors as the range of behavioral outcomes associated with experiencing interpersonal aggression at work. These four classes of outcomes are consistent with Kahn and Byosiere's (1992) typology of behavioral outcomes associated with stressors. They proposed that behaviors associated with experiencing organizational stressors can be grouped into five major categories: 1) Aggressive behavior at work, 2) Work role degradation/disruptions 3) Degradation/disruption of other life roles, 4) Flight from the job, and 5) Self-damaging behaviors (see also Cooper, Dewe & O'Driscoll, 2001). Kahn and Byosiere's (1992) first category (aggressive behaviors) is consistent with my

selection of CWBs as a behavioral outcome, their second category (work role degradation) is consistent with assessing OCBs, their third category (degradation of other life roles) maps onto my selection of work-family conflict, and their fourth category (flight from the job) is consistent with my inclusion of job search behaviors. While research on Kahn and Byosiére's (1992) fifth category, self-damaging behaviors (e.g., alcoholism, drug use, smoking), is clearly warranted, such behaviors have previously been related to interpersonal aggression at work (Richman, Rospenda, Flaherty & Freehls, 2001) and I have chosen to exclude them from the current research due to their clinical focus. In the paragraphs below, I discuss the direct relationships between interpersonal aggression and each of the behavioral outcomes shown in Figure 2.

Counterproductive Work Behaviors. Lab research in social psychology has consistently demonstrated that one of the best predictors of enacting aggression is having been the target of aggression (Bandura, 1973; Buss, 1961; Donnerstein & Hatfield, 1982; Gouldner, 1960; Helm, Bonoma & Tedeschi, 1972; Pruitt & Rubin 1986). In the organizational literature, this evidence for counter-aggression was the basis for Andersson and Pearson's (1999) paper on incivility spirals in the workplace, in which they argue that enacting uncivil behaviors at work will encourage other organizational members to reciprocate with further incivility, leading to an escalating spiraling effect of incivility. While Andersson and Pearson's (1999) theory focuses upon interpersonal aggression between seemingly equal parties, it is often the case that parties do not counter-aggress directly against the perpetrator (Heider, 1958; Kim, Smith & Brigham, 1998). Indeed, employees who were aggression targets over an extended period of time typically report that there was an imbalance of power within the relationship that made it

difficult for them to defend themselves (Davenport et al., 2002; Einarsen et al., 1994). Thus, I argued that CWB-I (interpersonal aggression) is one response to regularly experiencing interpersonal aggression at work, yet an alternative CWB response is enacting a variety of negative acts aimed at the organization as a whole (i.e., CWB-O). CWBs aimed at the organization are aggressive acts that may protect the target from harm, while still enabling the target to feel as if he or she has enacted an appropriate behavioral response. In support of this relationship, Duffy et al. (2002) found that social undermining was significantly related to CWB-I and CWB-O, yet I expanded upon this research by examining the relationship between a broader range of interpersonally aggressive acts and CWB rather than only examining the mild forms of aggression included in the social undermining construct, and by looking at mediators and moderators of this relationship. Consistent with this research evidence and theory, I proposed that experiencing interpersonal aggression would be associated with high levels of both interpersonally targeted and organizationally targeted CWBs.

Hypothesis 1: Interpersonal aggression experiences at work will be positively related to a) CWB-I, and b) CWB-O.

Organizational Citizenship Behaviors. A second possible response to frequently experiencing interpersonal aggression at work is to reduce levels of discretionary behaviors that help other individuals or that help the organization as a whole. Such behaviors have been referred to variously as organizational citizenship behaviors (OCBs; Organ, 1988), contextual performance (Borman & Motowidlo, 1993), prosocial organizational behavior (Brief & Motowido, 1986), and organizational spontaneity (George & Brief, 1992). In this dissertation, I adopted the term OCBs, which are

activities that contribute to the enhancement of the social and organizational environment yet are typically not included in formal job descriptions (Organ, 1988). Similar to the distinctions that have been made for CWBs, scholars have differentiated between OCBs aimed at helping other individuals (OCB-I) and OCBs aimed at helping the organization (OCB-O; Lee & Allen, 2002; McNeely & Meglino, 1994; Spector & Fox, 2002). As noted above, CWBs and OCBs have been discussed as parallel constructs (Giacalone & Greenberg, 1996; Spector and Fox, 2002), and consistent with the theoretical model proposed by Spector and Fox (2002), Miles, Borman, Spector and Fox (2002) found that the two constructs have similar nomological networks (albeit negatively related).

I proposed that although one response to being the target of interpersonal aggression is to enact CWBs, an equally plausible behavioral response is to withhold positive OCBs that help others or the organization. Some employees may not believe that it is appropriate for them to engage in negative actions that will harm others, yet the withholding of prosocial behaviors may be seen as justified, especially since withholding extra-role behaviors cannot be punished. This proposed relationship is consistent with Miles et al. (2002) and with Lee and Allen's (2002) recent work on parallels between CWBs and OCBs. The relationship between interpersonal aggression and OCBs was supported in one recent study (Zellars et al, 2002), yet these authors only examined interpersonal aggression perpetrated by supervisors, they did not examine OCB-I and OCB-O separately, and they did not examine CWBs as well. By examining OCBs in addition to CWBs, this dissertation extended the literature by exploring how both positive *and* negative work behaviors may be related to targets' experiences of interpersonal

aggression perpetrated by various organizational members, and by exploring mediators and moderators of this relationship. Thus I proposed the following:

Hypothesis 2: Interpersonal aggression experiences at work will be negatively related to a) OCB-I, and b) OCB-O.

Spillover to the Family. A widely studied topic in the organizational sciences is the oftentimes conflicting demands between work and family life, and the ways in which demands from one context “spillover” to the other context (Staines, 1980). Work-family spillover research has supported the assertion that the demands of the work context can indeed negatively influence the family context (Grzywacz, Almeida & McDonald, 2002; Grzywacz & Marks, 2000; Williams & Alliger, 1994), and produce work-family conflict. Work-Family Conflict (WFC) has been defined as “a form of interrole conflict in which the demands of, time devoted to, and strain created by the job interfere with performing family-related responsibilities” (Netemeyer, Boles & McMurrian, 1996, p. 401). Most research on the spillover hypothesis and WFC has been devoted to identifying their characteristics and correlates, with less attention to stressors in the organizational environment that may create strain and thereby influence levels of WFC. I argued that regularly experiencing interpersonal aggression at work is an organizational stressor that extends beyond workplace boundaries to influence levels of WFC. When one experiences interpersonal aggression at work, one is likely to be experiencing high levels of negative affect at work (as discussed in more detail below), and negative affect tends to spillover from the work context into relationships outside work (Williams & Alliger, 1994). In support of my proposition that interpersonal aggression is related to WFC, Tepper (2000) found that abusive supervision was positively related to levels of WFC,

yet I moved beyond this study by assessing the extent to which aggression perpetrated by supervisors and peers alike may affect WFC, and by exploring mediators and moderators of this relationship. Accordingly:

Hypothesis 3: Interpersonal aggression experiences at work will be positively related to levels of work-family conflict.

Job Search Behaviors. A final behavioral outcome that I considered in this study was job search behaviors. Job search behaviors (JSBs) refer to a variety of acts that reflect employees active attempts to find other employment (Blau, 1994; Kopelman, Rovenpor & Millsap, 1992). Job search behaviors include such acts as updating and sending out one's resume, contacting prospective employees, responding to help wanted ads, and interviewing with other employers. As argued by Kopelman et al. (1992), job search behaviors are proximal determinants of actual turnover. Indeed, research has demonstrated that measures of job search behaviors predict significant variance in actual organizational turnover above and beyond that accounted for by perceptual, attitudinal, affective, and turnover intentions measures (Blau, 1993; Kopelman et al., 1992).

As noted above, it has been established that targets of interpersonal aggression tend to report intentions to leave the organization (Ashforth, 1997; Cortina et al., 2001; Keashly et al., 1994, 1997; Leymann, 1996; Rayner & Hoel, 1997; Tepper, 2000), yet to my knowledge, no research has yet examined the relationship between interpersonal aggression and job search behaviors. Qualitative studies of persistent interpersonal aggression have reported that for many targets who experience aggression on a regular basis, the behaviors only ceased when the targets quit (Davenport et al., 2002; Namie & Namie, 2000), thus turnover is indeed an effective behavior for escaping interpersonal

aggression. I proposed that people who experience high levels of interpersonal aggression would engage in job search behaviors such that they are taking active steps to leave their current job situations. I extended previous work with my focus upon job search behaviors rather than turnover intentions, by examining how aggression from both supervisors and coworkers contribute to job search behaviors, I examined mediators and moderators of this relationship (as discussed below), and I examined this relationship in conjunction with the other behavioral outcomes that have been described above.

Accordingly:

Hypothesis 4: Interpersonal aggression experiences at work will be positively related to job search behaviors.

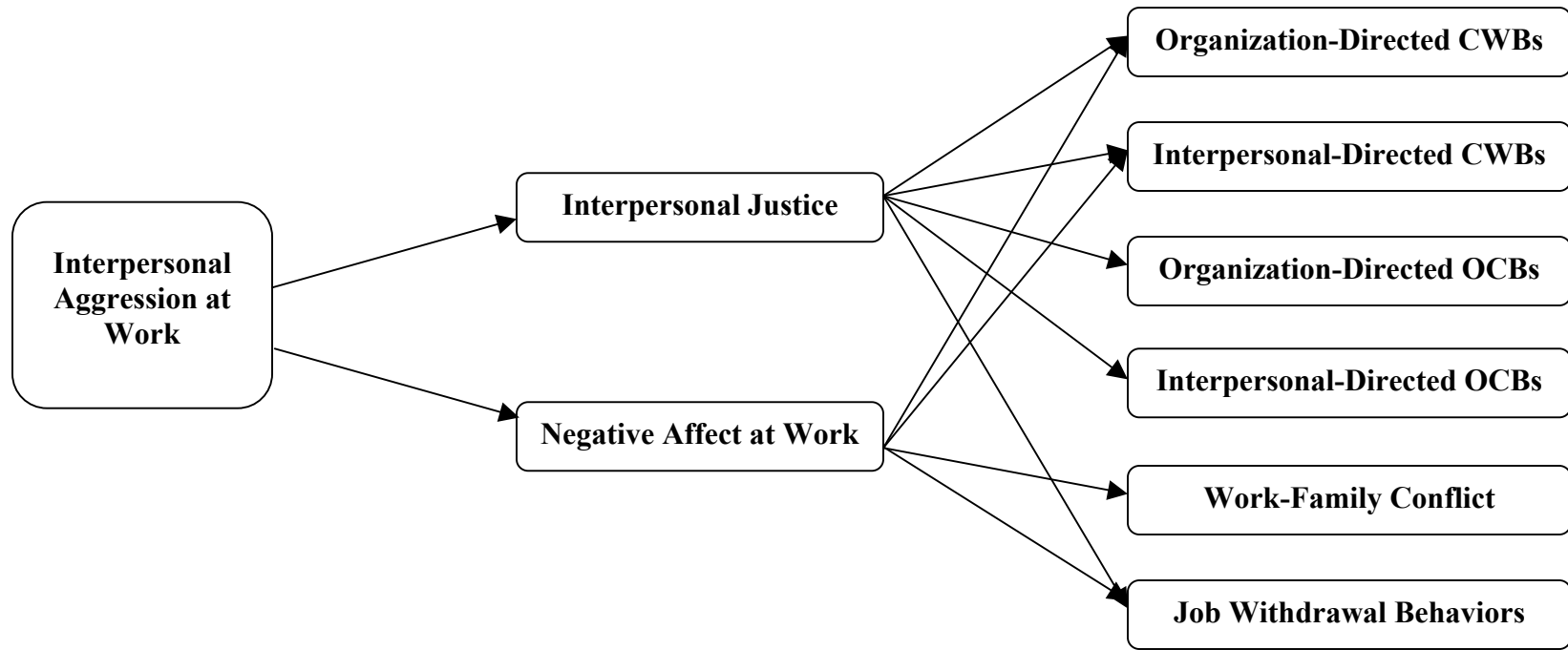
Summary. One major contribution of this research is that my theoretical model includes several different classes of behavioral outcomes that were assessed in a single study, rather than investigating a single behavioral outcome as has been done in previous research. In this section, I outlined four major classes of behaviors that I proposed to be associated with interpersonal aggression: 1) CWBs aimed at other individuals and at the organization, 2) OCBs aimed at other individuals and at the organization, and 3) spillover to the family context in the form of work-family conflict, and 4) job search behaviors. The preceding hypotheses suggested that there would be main effects of interpersonal aggression on each of these outcomes, yet these hypotheses have been simplified in that psychological mediators and moderators have not yet been discussed. In the next section, I detail the proposed psychological mediators of these relationships.

What psychological processes mediate the relationship between interpersonal aggression at work and behavioral outcomes?

When one experiences interpersonal aggression, there is not a “knee jerk” behavioral reaction without intervening psychological processes. Rather, research and theory on single episodes of aggression have shown that after being exposed to aversive stimuli, targets have a variety of psychological reactions (Folger & Skarlicki, 1998; Martinko, Gundlach & Douglas, 2002; Martinko & Zellars, 1998; Neuman & Baron, 1996) including negative mood and perceptions of interpersonal injustice (Folger & Skarlicki, 1998; Martinko et al., 2002; Spector & Fox, 2002). I proposed that the general principles developed from the episodic study of aggression also apply to my model wherein interpersonal aggression is a stressor experienced regularly at work. As can be seen in Figure 3, I suggested that frequently experiencing interpersonal aggression at work would be associated with perceptions of interpersonal injustice and with negative affective states at work, and these negative cognitions and emotions subsequently would have relationships with the behavioral outcomes discussed above. As such, they would act as mediators. In the paragraphs below, I discuss these psychological mediators and their differential relationships with the outcomes.

Figure 3

Model Detailing the Mediators of the Relationship between Interpersonal Aggression and Behavioral Outcomes



As seen in Figure 3, interpersonal justice and negative affect at work are proposed to be distinct constructs that both influence the enactment of behavioral outcomes, and there is evidence to support these constructs' independent contributions. In the CWB literature, scholars investigating psychological predictors of CWBs have tended to adopt *either* a cognitive perspective with a focus on justice perceptions (e.g., Greenberg & Alge, 1998; Jawahar, 2002) *or* an emotional perspective with a focus on work-related affect (e.g., Glomb, 2002; Miles et al., 2002; Spector & Fox, 2002), and both camps have presented convincing models and empirical evidence (as reviewed below) for the contribution of their constructs. Two studies that investigated interactional justice and affective variables together (Aquino, Lewis & Bradfield, 1999; Skarlicki et al., 1999), found that negative affectivity and interactional justice were non-significantly correlated ($r = .22$ and $r = .10$ respectively), and that both variables contributed to the prediction of revenge and retaliatory behaviors. I did not propose a causal link between these two constructs, but rather, as seen in Figure 3, they are considered to be psychological processes that occur in tandem. While a detailed analysis of a single aggression episode might reveal a causal sequence (Martinko & Zellars, 1998), I assessed aggregate experiences and perceptions and thus consider these as parallel constructs (c.f., Aquino et al., 1999; Lee & Allen, 2002; Skarlicki et al., 1999). Both of the psychological constructs are considered below, along with hypotheses for each.

Interpersonal Justice. The organizational justice literature has moved from an exclusive focus upon outcome fairness (i.e., distributive justice) to a consideration of procedural and interactional justice as well (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Interactional justice refers to the notion that people are sensitive to the quality of

interpersonal treatment that they receive (Bies & Moag, 1986; Bies & Shapiro, 1987), and it can be further divided into two dimensions: 1) *interpersonal justice*, which refers to the degree to which people perceive that they are treated fairly and with respect, and 2) *informational justice*, which refers to the extent to which people perceive that the explanations that they receive for the procedures and outcomes are adequate (Greenberg, 1990b, 1993). I focused upon interpersonal justice in this study (as detailed below). Interpersonal justice perceptions typically refer to interpersonal treatment received from authority figures during the enactment of formal procedures (Colquitt, 2001), however, consistent with Donovan, Drasgow and Munson (1998), I adopted a broader perspective in this research to encompass participants' evaluations of the fairness of interpersonal treatment received *in general* at work – i.e., everyday treatment, not only that enacted by supervisors during formal procedures.

I proposed that experiencing interpersonally aggressive acts at work on a regular basis would be associated with a belief that one is treated unjustly at work, and that these perceptions of injustice would subsequently predict the behavioral outcomes outlined above. When one is the target of interpersonal aggression at work, one attempts to make sense of what has happened (c.f., Weick, 1995), and since the focus of this sensemaking is how one was treated interpersonally, interpersonal justice perceptions come into play (Folger & Skarlicki, 1998). As reviewed by Miller (2001), when people are treated in a disrespectful or demeaning manner, they are likely to perceive that treatment as unjust. According to one line of reasoning (Bordieu, 1965), a disrespectful act is an affront to one's own self-image and ability to project a positive self-image to others, and thus disrespectful treatment deprives people of something that they believe is rightfully theirs

(i.e., positive self-image). According to another argument (Miller, 1993), disrespectful treatment creates a social imbalance, and as such, it subjects people to something that they do not deserve. According to either line of reasoning, there is a clear and consistent linkage between experiencing demeaning and disrespectful treatment (e.g., interpersonal aggression) and perceiving interpersonal injustice.

Procedural and distributive justice are associated with perceptions of organizational procedures and personal outcomes respectively (Greenberg, 1990b), thus they are not expected to be as closely linked with interpersonal aggression as are interpersonal justice perceptions. My model is specifically aimed at understanding behaviors associated with interpersonal aggression and its associated psychological processes rather than understanding the impact of *other* stressors (e.g., unfair procedures or outcomes), and since procedural and distributive justice also predict behavioral outcomes (e.g., Aquino et al., 1999; Skarlicki et al., 1999), I controlled for these other forms of justice in all analyses. In support of the proposed relationship between experiencing interpersonal aggression and interpersonal injustice, Tepper (2000) found that interactional justice was negatively related to experiencing abusive supervision ($r = -.53$), yet I extended this research by focusing specifically upon interpersonal justice, and by examining its influence above and beyond that of procedural and distributive justice.

In line with the role of justice as a mediator, theory and research have also shown that interactional justice predicts the dependent variables in my model, including CWBs, OCBs and job search behaviors. Several studies have demonstrated that interactional injustice predicts CWBs (Aquino et al., 1999; Aquino et al., 2001; Greenberg & Alge, 1998; Skarlicki & Folger, 1997; Skarlicki et al., 1999), and there is some evidence that

interactional injustice is an even stronger predictor of behavioral outcomes than are either procedural or distributive injustice (Aquino et al., 1999; Colquitt & Greenberg, 2003). In their theoretical model of the antecedents of CWBs and OCBs, Spector and Fox (2002) conclude that justice perceptions significantly predict both CWBs and OCBs in exactly opposite directions. Indeed, in a meta-analytic review of the justice literature, Colquitt et al. (2001) reported that the corrected population correlation between interpersonal justice and OCB-I was .29. There has been little work on the relationship between interpersonal justice and job search behaviors, yet there is some evidence that suggests interpersonal justice and turnover intentions are negatively related (Tepper, 2000). In sum, the literature suggests that interpersonal fairness indicators are associated with CWBs, OCBs, and job withdrawal. In line with this discussion, I proposed that interpersonal aggression would be negatively related to interpersonal justice perceptions, which in turn predict CWBs, OCBs, and job search behaviors.

Hypothesis 5: Interpersonal justice perceptions will mediate the relationship between interpersonal aggression and a) CWB-I, b) CWB-O, c) OCB-I, d) OCB-O, and e) job search behaviors.

Note that I did not offer a hypothesis for work-family conflict in the list of behavioral outcomes associated with interpersonal justice perceptions. When targets are unjustly treated at work, they tend to behave in a manner that is consistent with reducing levels of perceived injustice (Greenberg & Alge, 1998; Miller, 2001). If the source of the unfairness is in the workplace, targets will try to reduce the levels of injustice in that context by enacting behaviors aimed at the source of the aversive event (Jawahar, 2002). As discussed in more detail below, it is frequently not possible to react to injustices

toward the perpetrator (especially if he or she is powerful), so responses are often displaced onto others with high stimulus similarity in the *proximal* environment (Miller, 1948; Marcus-Newhall, Pedersen & Miller, 2000; Martinko & Zellars, 1998). However, enacting negative behaviors towards a family member is unlikely to benefit the employee by reducing perceived injustices in the work context, thus I did not expect a relationship between interpersonal justice and WFC. Moods, however, do tend to spill over from one context to the next (Williams & Alliger, 1994), thus I did expect a relationship between negative affect and WFC, as discussed next.

Negative Affect at Work. A great deal of psychological research on emotions has supported the circumplex model of affect, in which emotions can be organized into the orthogonal dimensions of positive affect and negative affect (Watson & Tellegen, 1985). According to this theory, high positive affect consists of emotions such as elated, excited, and happy, whereas low positive affect consists of emotions such as calmness and being at rest. In contrast high negative affect consists of emotions such as irritable, nervous, and distressed, whereas low negative affect consists of fatigue and sluggishness (Burke, Brief, George, Roberson & Webster, 1989; Watson, Clark & Tellegen, 1988). Positive and negative affect can be examined as dispositional traits across situations (Deffenbacher et al., 1996) or they can be examined as states experienced at work (Burke et al., 1989).

The emotions that have most consistently been associated with interpersonal aggression are anger or hostility (Glomb, 2002; Lee & Allen, 2002), and there is little evidence to suggest that interpersonal aggression would influence levels of positive affect (e.g., being happy/elated or calm/at rest; Glomb et al., 2002). Thus, I proposed that interpersonal aggression would be associated with negative affect at work. Research on

specific encounters of aggression (Fitness, 2000; Glomb, 2002) has demonstrated that a very commonly reported reaction during aggressive experiences is anger. Other negative affective states such as anxiety, distress, and fear have regularly been shown to result when people are exposed to stressors (Cooper, Dewe & O'Driscoll, 2001; Kahn & Byosiere, 1992). I proposed that when one regularly experiences aggression at work, one is also likely to have frequent experiences of negative affect that result from these episodes of aggression. If these aggressive episodes occur frequently, the negative affect at work may be pervasive and thus one is likely to report that one's negative affect at work is generally negative.

Consistent with my proposition that negative affect at work mediates the relationship between interpersonal aggression and behavioral outcomes (see Figure 3), negative affect at work has been identified as an antecedent to counterproductive work behaviors (Aquino et al., 1999; Martinko & Zellars, 1998; Miles et al., 2002; Spector & Fox, 2002) and job withdrawal. Spector and Fox (2002) discussed the emotion-focused coping approach (Lazarus, 1995), which proposes that when employees experience strong negative emotions, they are motivated to reduce those feelings through action. In the case of negative affect resulting from being the target of interpersonal aggression, the target might engage in various strategies to reduce the negative affect, including counter-aggression (aimed either at the target, the organization, or others present in the environment) and avoiding the perpetrator. With regard to negative affect as an antecedent to job search behaviors, there is indirect support for this link through the relationship between negative job attitudes and turnover intentions (Hulin, 1992). Furthermore, Miller and Rosse (2002) provide a detailed analysis of the relationship

between negative affect and job withdrawal. Based upon this theory and research, I argued that negative affect at work would mediate the relationship between being a target of interpersonal aggression and both CWBs and job search behaviors.

In addition to the relationships between negative affect, CWBs and job search behaviors, I proposed that negative affective states associated with interpersonal aggression would subsequently predict work-family conflict. This hypothesis is based upon research on mood spillover by Williams and Alliger (1994), who found that negative affect from work frequently spilled over from work to the family context. Negative mood spillover from work to family is not expected to be a conscious process, and thus targets of interpersonal aggression may be surprised to find that their non-work relationships become impaired over time if they are persistently mistreated at work. Significant others may become unintended targets of spillover negative emotions, and thus the employee target may unwittingly mistreat his or her sources of social support and eventually alienate him or her. Support for this assertion can be found in the workplace bullying literature, which reports that targets tend to experience impaired relationships with their family and/or significant others as a result of the interpersonal aggression at work (Davenport et al., 2002; Namie & Namie, 2000). Some scholars (Leymann, 1996; Namie & Namie, 2000) have even argued that when expulsion from the job and/or workforce due to bullying is coupled with the dissolution of personal relationships, targets may engage in drastic acts such as suicide or vengeance homicides, such as those seen in the U.S. media. Based upon the existing evidence, I proposed that negative affect (as experienced at work) would mediate the relationship between interpersonal aggression and work-family conflict.

Hypothesis 6: Negative affect at work will mediate the relationship between interpersonal aggression and a) CWB-I, b) CWB-O, c) work-family conflict, and d) job search behaviors.

Note that I proposed relationships between negative affect and both forms of CWB, work-family conflict, and job search behaviors, yet no relationship with OCBs is listed. As argued above, I proposed that justice perceptions would be associated with OCBs, yet negative affect at work would not be. The rationale for this is that employees are motivated to reduce their feelings of injustice (Greenberg & Alge, 1998), and a reduction in OCBs will help to “even the score” (Lee & Allen, 2002). In contrast, while employees are also motivated to reduce their levels of negative affect (Spector & Fox, 2002), reducing levels of OCBs will not help in this regard since OCBs are associated with positive affect (George, 1991; George & Brief, 1992), and OCBs are unrelated to negative affect (Spector & Fox, 2002; Lee & Allen, 2002; Miles et al., 2002). As such, negative affect is not expected to mediate the relationship between interpersonal aggression and OCBs.

Summary. In this section, I provided the rationale and hypotheses for the mediating roles of interpersonal justice and negative affect at work in predicting differential behavioral outcomes. In the preceding discussion, little attention was paid to the contextual features of the job environment or to the targets’ or perpetrators’ characteristics. However, such characteristics may well influence the conditions under which the preceding hypotheses are supported, and thus contextual features may play a moderating role in the relationship. I now turn to a discussion of job, target and

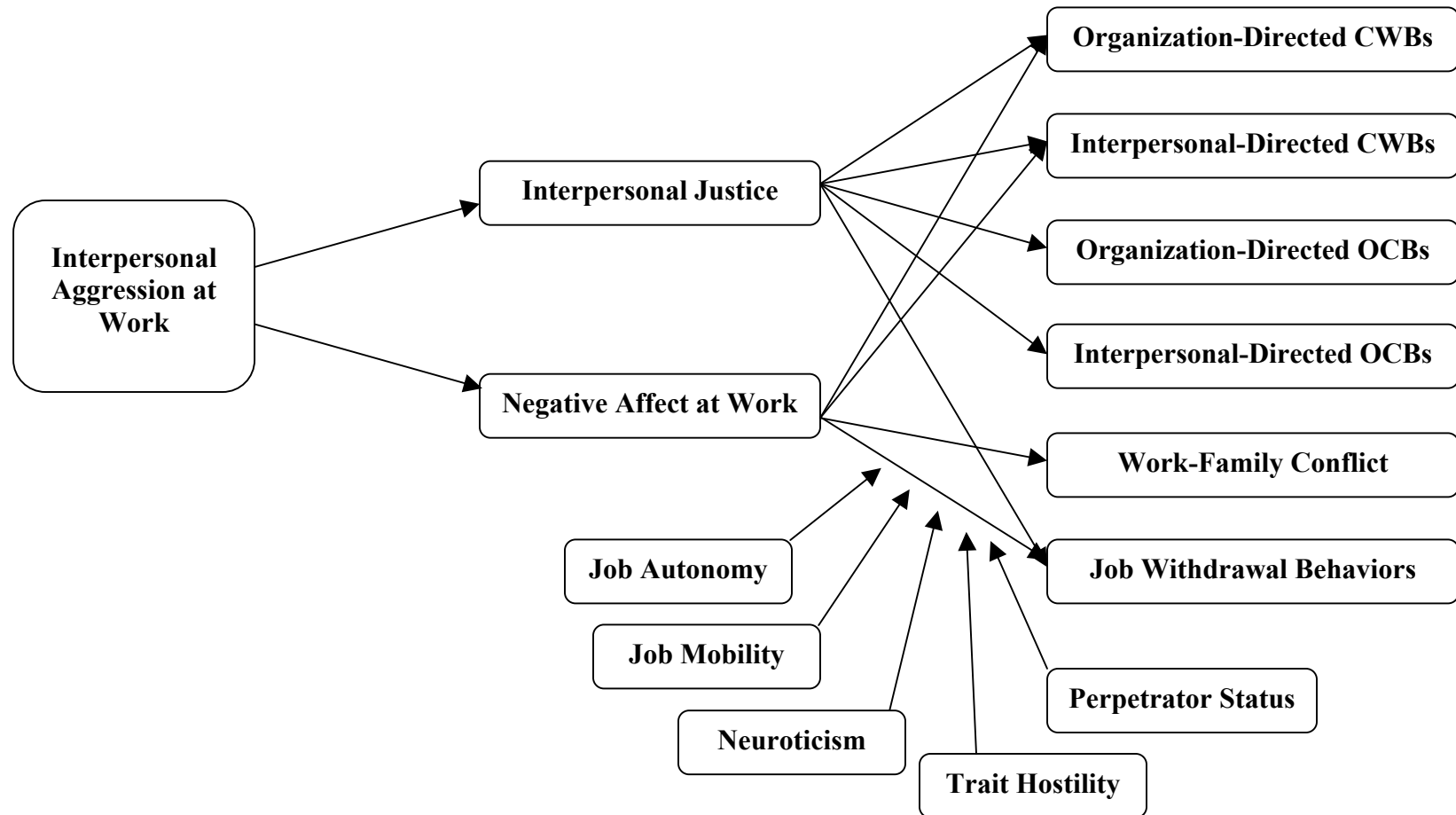
perpetrator characteristics that are proposed to moderate the relationships between psychological processes and subsequent outcomes.

What factors moderate the relationship between interpersonal aggression at work and behavioral outcomes?

While there has been little attention to the behavioral outcomes of stressors in general (Cooper et al., 2001) and interpersonal aggression in particular (Glomb et al., 2002), there has been even less attention to the various conditions under which such behaviors are enacted. In this dissertation, I aimed to fill this gap in the literature by exploring the moderating influence of several different characteristics of jobs, the target, and the perpetrator. Hypothesized relationships with moderators can be seen in Figure 4, which portrays five moderators of the relationship between cognitive and emotional processes and behavioral outcomes. More specifically, there are two job characteristics that are proposed to influence these relationships, namely job autonomy and job mobility. Second, there are two target characteristics that are proposed to influence the relationship between psychological processes associated with aggression and behavioral outcomes, namely dispositional hostility and neuroticism. Finally, one characteristic of the perpetrator, namely whether he or she is a supervisor or a coworker, is also expected to influence the relationship between psychological processes and outcomes. Each of these moderated relationships, along with hypotheses, is considered in the paragraphs below.

Figure 4

Model detailing the Mediators and Moderators of the Relationship between Interpersonal Aggression and Behavioral Outcomes



Job Characteristics – Job Autonomy. Job autonomy has been defined as simply as “control over one’s own work” (Spector & Fox, 2003, p. 418), and a relationship between perceived control of organizational stressors and reduction of negative outcomes has been supported in the organizational stress literature (Cooper et al., 2001; Schat & Kelloway, 2000; Spector, 1998). This relationship forms the basis for the “job demands-control” model (Karasek, 1979), which shows that the impact of high demands in work roles may be offset by the perception that one has control over important parts of the work environment. However, Spector and Fox (2002) recently argued that control may need to be enacted directly over the stressor in order to have buffering effects.

In this dissertation, I focused upon job autonomy as a moderator of the relationship between negative affect and behavioral outcomes. As argued above, I proposed that interpersonal aggression would be associated with negative affect at work, yet the strength of the relationship between negative affect and behavioral outcomes is proposed to depend upon levels of autonomy in the job. When targets have high levels of job autonomy, they have the latitude to establish strategies to reduce negative affect (e.g., taking a break to “cool off,” coming in early to work without the perpetrator present), and thus the relationships between negative affect and subsequent behavioral outcomes (CWBs, WFC and job search behaviors) should be attenuated. However, if targets have low levels of job autonomy, they may be unable to find ways to structure their work to avoid the stressor and thus, in this situation, I expected that relationships between negative affect and subsequent behavioral outcomes (CWBs, WFC and job search behaviors) would be most evident. Consistent with this discussion, I offered the following hypothesis:

Hypothesis 7: Job autonomy will moderate the relationship between negative affect and behavioral outcomes, such that people with high autonomy will be less likely to enact a) CWB-I, b) CWB-O, c) job search behaviors, and to have d) work family conflict, than people with low job autonomy.

Note that I did not propose a moderated relationship between interpersonal justice and behavioral outcomes. As described above, targets of interpersonal aggression are motivated to reduce levels of negative affect (Spector & Fox, 2002) and perceptions of interpersonal injustice (Greenberg & Alge, 1998; Jawahar, 2002). I argued that having control over one's work environment is likely to enable targets to establish alternative strategies to reduce negative affect, and thereby attenuate the relationship between negative affect and the negative outcomes. For instance, by having the autonomy to take a break in the middle of the day to meet a friend for coffee, one can reduce levels of negative affect and put oneself in a better mood. In contrast, perceptions of justice are most likely to be restored by taking actions aimed at the perceived source of the aversive event (Jawahar, 2002) or at others in the proximal environment (Marcus-Newhall et al., 2000; Martinko & Zellars, 1998). To continue with the example above, having the leeway to take a break in the middle of the day is unlikely to help one escape feelings of injustice, since no action has been taken towards the employer to restore levels of justice. I explored autonomy as a potential moderator for interpersonal justice, yet I expected that the relationships between interpersonal justice and behavioral outcomes would exist without regard for level of job autonomy.

Job Characteristics –Job Mobility. Similar to the arguments made for job autonomy, job mobility should influence targets’ feelings of control over the aversive situation, and subsequently influence the enactment of various behavioral outcomes (c.f., Cooper et al., 2001; Schat & Kelloway, 2000; Spector, 1998). When employees are experiencing interpersonal aggression yet they know that they can leave the stressful situation and find another acceptable job, they are likely to either search for another job (Ashforth, 1997; Cortina et al., 2001; Keashly et al., 1994; Tepper, 2000) or they may be more likely to effectively cope with the situation, knowing that they have chosen to stay. Thus, the relationships between negative psychological processes and negative behavioral outcomes will be attenuated when one has high levels of job mobility. Support for this proposition comes from Tepper (2000), who hypothesized and found that the negative consequences of abusive supervision were attenuated for subordinates who had high job mobility, yet I extended this previous research by looking at job autonomy in conjunction with psychological mediators, other moderators, and in relation to aggression from both supervisors and coworkers. Accordingly:

Hypothesis 8: Job mobility will moderate the relationship between both psychological mediators and behavioral outcomes, such that people with high mobility will be less likely to enact a) CWB-I, b) CWB-O, c) job search behaviors, and to have d) work family conflict, than people with low job mobility.

Note that contrary to Hypothesis 7 for job autonomy, both negative affect *and* interpersonal justice are included in the hypothesis for job mobility. Perceptions of injustice are typically restored by taking action aimed at the perpetrator or others in the

proximal environment. Having high levels of control over one's work environment (i.e., job autonomy) is unlikely to help one restore justice, yet having the ability to leave one's job and find better employment (i.e., job mobility) is one way for employees to restore justice. Thus, a moderated relationship between interpersonal justice and the behavioral outcomes listed above was expected.

Target Characteristics – Dispositional Hostility. Dispositional hostility (or trait anger), “the disposition to perceive a wide range of situations as annoying or frustrating, and the tendency to respond to such situations with more frequent elevations in state anger” (Spielberger, Sydeman, Owen & Marsh, 1999, p. 1), has consistently been recognized as an individual antecedent to engaging in CWBs (Fox et al., 2001; Lee & Allen, 2002) and aggression (Glomb et al., 2002). Indeed, there is evidence that dispositional hostility is a strong predictor of engaging in workplace deviance (Lee & Allen, 2002) and workplace aggression (Douglas & Martinko, 2001), even after controlling for other person and situational variables.

I proposed that the negative effects of hostility would be more far-reaching and include an increased likelihood of enacting all of the negative behavioral outcomes examined in this dissertation. When hostile people have high levels of negative affect and injustice perceptions associated with experiencing aggression, they are likely to engage in a wide range of negative acts to reduce their negative emotions and injustice. As noted by Douglas and Martinko (2001), people with high levels of trait anger are more likely to react aggressively to provoking situations. This may be due, in part, to a lack of self-control (i.e., a lack of inhibitions) such that hostile people have a difficult time managing their frustrations and may find it very difficult to remain calm during

provocative situations (Buss, 1961; Geen, 1990). I proposed that the negative acts enacted by hostile employees in response to injustices and negative affect would likely include increases in CWBs, decreases in OCBs, and attempts to leave the organization. People with high hostility may also have a difficult time leaving their negative affect at work, and thus may be more susceptible to negative mood spillover and subsequent work-family conflict. In contrast, low-hostility people may be less likely to “act out” to reduce their negative emotions and injustice because of their greater self-control and inhibitions (Geen, 1990), and thus I expected the relationships between psychological processes and behavioral outcomes to be less pronounced for people low in dispositional hostility.

Hypothesis 9: Dispositional hostility will moderate the relationship between both psychological mediators and behavioral outcomes, such that people with high hostility will have higher levels of a) CWB-I, b) CWB-O, c) job search behaviors, and d) work family conflict; and lower levels of e) OCB-I and f) OCB-O than people with low hostility.

Target Characteristics – Neuroticism. Neuroticism (or its opposite, emotional stability) is one of the Big Five personality characteristics that consists of characteristics such as being anxious, depressed, worried, or insecure (Barrick & Mount, 1991; Costa & McCrae, 1988; Digman, 1990). Surprisingly, there is little research on neuroticism in the counterproductive work behavior literature, yet there is some initial evidence that neurotic people are more likely to have high levels of turnover and that they tend to perform more deviant behaviors (albeit non-significantly more) than people low on neuroticism (Salgado, 2002). In the discussion of their study on the moderating effect of

personality in the relationship between fairness and retaliation, Skarlicki et al. (1999) suggested that future research should investigate how other personality traits moderate this relationship. Thus, another contribution of this study is the investigation of neuroticism as a moderator of the relationship between psychological processes associated with interpersonal aggression (i.e., injustice, negative affect at work) and behavioral outcomes.

Similar to the arguments above for dispositional hostility, I proposed that people who are high on neuroticism would be likely to engage in a range of negative acts when they have high levels of negative emotions and injustice associated with interpersonal aggression. In contrast, people who are low on neuroticism (i.e., those who are emotionally stable) would be less likely to engage in negative acts associated with high negative affect and perceived injustice. People who are high on neuroticism are likely to have extreme reactions to events that others may perceive as non-threatening (Goldberg, 1999). Accordingly, when neurotic people believe that they have been unjustly treated, they may behaviorally react to these injustice perceptions in a more severe manner than do people with low neuroticism, including increasing their CWBs, lowering their OCBs, increasing their job search behaviors and also experiencing more work-family conflict. In contrast, emotionally stable people may find adaptive ways of coping with their perceived injustice and negative affect, rather than engaging in these negative behavioral acts. Qualitative evidence from the bullying literature supports these arguments by showing that emotionally stable people who are “centered and reasonably happy” in their broader lives (p. 88) often find positive ways of coping with the interpersonal

mistreatment and associated negative psychological processes (Davenport et al., 2002).

In line with this discussion:

Hypothesis 10: Neuroticism will moderate the relationship between both psychological mediators and behavioral outcomes, such that people with high neuroticism will have higher levels of a) CWB-I, b) CWB-O, c) job search behaviors, and d) work family conflict; and lower levels of e) OCB-I and f) OCB-O than people with low neuroticism.

Perpetrator Characteristics. Perpetrator status is an important moderator to consider because it is a variable that is expected to influence which particular behaviors that the target enacts. In order to illustrate the hypothesized relationships, I depicted the differences in perpetrator status in two different figures – Figure 5, where the supervisor is the perpetrator, and Figure 6, where a coworker is the perpetrator.

I proposed that targets would enact different behaviors with different targets, depending upon whether the perpetrator is a supervisor who is a representative of the organization who controls desired outcomes (e.g., time, salary, assignments) or whether the perpetrator is a coworker at the same level. Figures 5 and 6 demonstrate that when supervisors are perpetrators, relationships with CWB-O and OCB-O are more evident, yet when coworkers are perpetrators, relationships with CWB-I and OCB-I are more evident. Previous research on interpersonal aggression at work has not addressed the role of perpetrator status as a moderator that determines which behaviors will be enacted (i.e., who is the target of the negative behavioral outcomes).

Figure 5

Model detailing the Mediators and Moderators of the Relationship between Interpersonal Aggression and Behavioral Outcomes, when
a Supervisor is the Perpetrator

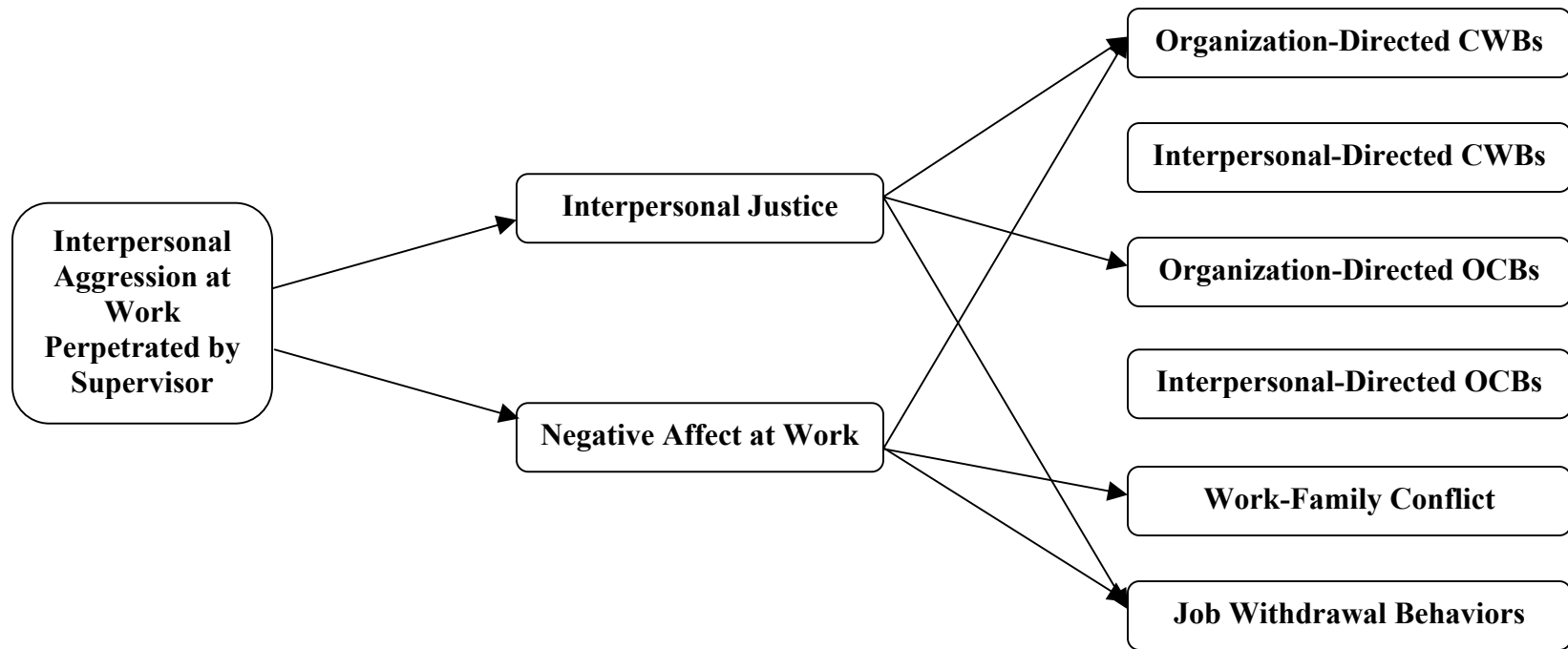
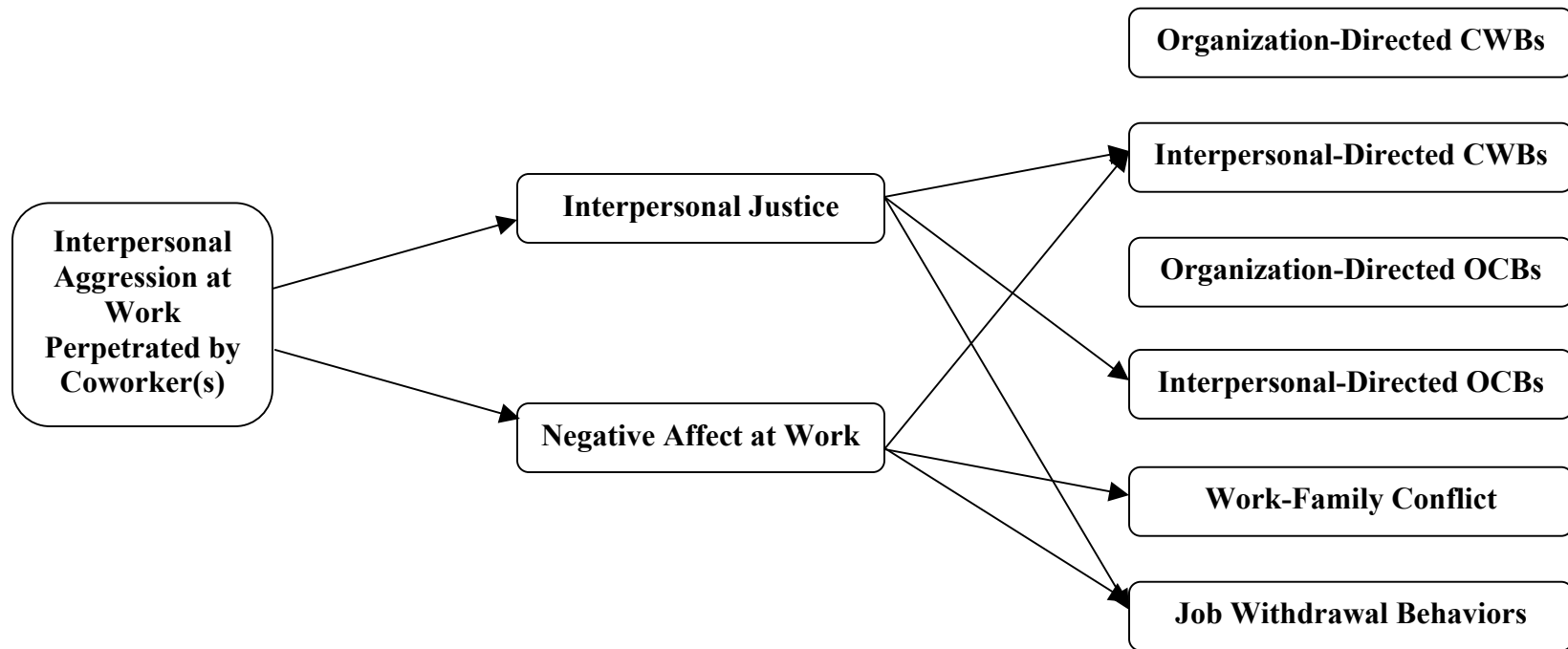


Figure 6

Model detailing the Mediators and Moderators of the Relationship between Interpersonal Aggression and Behavioral Outcomes, when
a *Coworker* is the Perpetrator



As described above, research on single episodes of aggression has demonstrated that aggression can result in counter-aggression against the perpetrator (Bandura, 1973; Buss, 1961; Donnerstein & Hatfield, 1982; Gouldner, 1960; Helm et al., 1972; Pruitt & Rubin, 1986), yet negative reactions are also frequently displaced onto other targets as well (Heider, 1958; Kim et al., 1998). Indeed, Spector (1996) argued that most antisocial responses to frustrators in organizations (such as experiencing aggression or other stressors) are displaced or indirect (c.f., Neuman & Baron, 2003). This may particularly be the case when the perpetrator is has much higher status than the target due to fear of punishment, which is a powerful inhibitor of aggressive behavior (Graham, Charwat, Honig, & Wertz, 1951). In this case, employees may displace their negative actions towards the social collective that the high-power perpetrator represents (i.e., the organization) (c.f., Martinko & Zellars, 1998). Even when status differentials are not involved, targets of aggressive acts often displace their negative reactions upon others in the immediate environment, such that others can unwittingly become targets of counter-aggression or negative responses (Berkowitz, 1962; Buss, 1961). In particular, aggression is often displaced onto individuals who are close in proximity to the perpetrator and who have high similarity to the perpetrator (e.g., coworkers in the immediate environment if a coworker is the perpetrator; Miller, 1948; Martinko & Zellars, 1998).

Based upon these arguments, I proposed that targets who experience aggression from supervisors would be likely to displace their counter-aggression and negative reactions to the organization as a whole. Supervisors are representatives of the organization and when employees experience mistreatment from a supervisor, they are likely to perceive

that an official representative of the organization enacted the behavior, and thus the organization is responsible for their mistreatment (c.f., Martinko & Zellars, 1998). In this situation, I expected that targets would increase their levels of organizationally directed aggression (CWB-O) through acts such as theft and sabotage, and also decrease their levels of OCBs that are aimed at helping the organization (OCB-O). In this manner, targets are able to enact behavioral responses that are consistent with the perceived perpetrator (i.e., the supervisor as a representative of the organization) while also protecting themselves from harm that would result from direct counter-aggression towards the supervisor.

In contrast, when coworkers perpetrate interpersonally aggressive acts, I proposed that targets would be unlikely to engage in acts aimed at the organization as a whole, and are instead likely to enact behavioral responses aimed at other individuals in the work environment. Coworkers do not typically control target's important desired outcomes (e.g., pay, employment status, vacations) and are less likely than supervisors to be able to punish a coworker through such means, thus when a coworker engages in aggression, the target may be less likely to monitor his or her behavioral responses to prevent counter-aggression or other negative responses (Baron & Richardson, 1994). Thus, targets who experience aggression from a co-worker are more free to enact counter-aggression against the perpetrator or to displace the aggression against similar others who happen to be present in the work environment (typically other co-workers). In this situation, I hypothesized that targets would increase their levels of interpersonally directed aggression (CWB-I), and also decrease their levels of OCBs that are aimed at helping the

others in the work environment (OCB-I). Consistent with the above discussion, I proposed the following hypothesis:

Hypothesis 11: Perpetrator status (i.e., supervisor vs. coworker) will moderate the relationship between psychological processes and a) CWB-I, b) CWB-O, c) OCB-I, and d) OCB-O.

Note that Figures 5 and 6, as well as the hypotheses and discussion above, do not indicate that perpetrator status will moderate relationships for work-family conflict or for job search behaviors. Regardless of who perpetrates the interpersonally aggressive acts, targets experience such behaviors as aversive and undesirable (Duffy et al., 2002; Einarsen et al., 1994; Hoel et al., 1999; Neuman & Keashly, 2003a; Zapf et al., 1996), and targets enact negative behaviors such as job withdrawal (Cortina et al., 2001; Keashly et al., 1994, 1997; Leymann, 1996) regardless of the perpetrator. Thus, I explored these relationships in my analyses, yet I expected that work-family conflict and job search behaviors would be associated with interpersonal aggression under conditions of both supervisor and coworker mistreatment.

Summary of Proposed Model

In summary, I presented a model of the relationship between experiencing interpersonal aggression at work and enacting a range of behavioral strain responses (see Figure 2), and provided several hypotheses that were tested in this research. More specifically, I proposed that interpersonal aggression is an organizational stressor that is associated with CWBs, OCBs, work-family conflict, and job search behaviors. I further hypothesized that the relationship between aggression and behavioral outcomes would be mediated by interpersonal justice and negative affect at work. Finally, I proposed that the

relationship between psychological processes (interpersonal justice and negative affect) and behavioral outcomes would be moderated by job characteristics (i.e., job autonomy, job mobility), target characteristics (i.e., hostility, neuroticism), and perpetrator characteristics (i.e., perpetrator status). These hypotheses were examined by administering a survey of existing research scales to a relatively random sample of working adults. The analytic strategy consisted of conducting a series of hierarchical linear regressions to examine the proposed main effects (Hypotheses 1-4), mediations (Hypotheses 5 & 6) and continuous moderators (Hypotheses 7-10). Finally, moderated SEM was employed to test Hypothesis 11, perpetrator status as a moderator of the CWB and OCB relationships, due to the categorical nature of this moderator variable. I now turn to the methodological details of this study.

CHAPTER 3 -- METHOD

Overview

I tested the hypotheses described above with data gathered from a field study in which I assessed each of the components of the proposed model with measures included in an anonymous survey, and the participants were a broad sample of working adults who were employed in a wide variety of organizations, occupations, and industries. In line with my goal of testing a theoretically based model of behavioral outcomes associated with interpersonal aggression that would be applicable across numerous organizational contexts, I prioritized the importance of gathering data from a broad sample of participants such that the generalizability of the results (i.e., external validity) should be high. Furthermore, scholars have argued that it is essential to ensure participants full anonymity when collecting data on behaviors that are highly sensitive and may be illegal and/or elicit dismissal from their jobs (Bennett & Robinson, 2000). Lee (1993) summarized data showing that people tend to underreport on questions that ask about sensitive topics such as deviant behavior. Although the utilization of completely anonymous surveys may encourage people to respond to questions more openly, they are likely to be more honest in their responses when data are not collected in an organizational setting. Bennett and Robinson (2000) note that “even when anonymity is guaranteed, respondents may provide different reports if the self-reports are collected within an organizational setting” (p. 358), which corresponds with my anecdotal experience of collecting data on sensitive topics in organizational settings and finding that several participants refused to believe that the surveys were truly anonymous (c.f., Roth & BeVier, 1998). In line with this discussion, I chose to collect anonymous survey

data from a relatively random sample of participants who were *outside* of their work contexts. One concern about collecting self-report data on multiple constructs from the same source is single-source bias (Campbell & Fiske, 1959; Spector, 1987), which is discussed in detail following the participants, procedure and measures.

Participants and Procedure

The ideal sample for this research would be a representative sample of working adults who are diverse with regard to jobs, organizational membership, industry, functional background, age, gender, race, education, tenure, and socio-economic status, among other factors. Such a broad array of personal, job and organizational characteristics would ensure that the study has high external validity and thus the findings would be generalizable across much of the population. A sample with these characteristics was available in the State of Maryland Motor Vehicle Administration (MVA) waiting areas. When residents go to the MVA to get a new driver's license, renew a driver's license, or register a vehicle, they are often required to wait up to an hour and a half for these services. While sitting in the waiting areas, there are no televisions, magazines, or newspapers to occupy these adults' time, and most of them did not bring reading materials with them. I contacted the main administrative headquarters of the Maryland MVA and after clearly explaining the purpose of the study and the procedures to MVA officials, I received permission to survey adults waiting at five MVA branches in throughout Maryland.

Participants were 728 adults who had gone to a Motor Vehicle Administrative office for services related to either their driver's license or their vehicle registration. These participants were at one of the five MVA branches that were chosen because, according

to the MVA Administration (based upon their experiences with customer service surveys), these branches collectively represented the Maryland population. The branches included Gaithersburg (i.e., suburban northwest Washington D.C.), Glen Burnie (i.e., suburban Baltimore), Largo (i.e., suburban eastern Washington D.C.), Frederick (i.e., small city/rural Maryland), and Baltimore City (i.e., inner city). Of the 728 people who participated, 52 people completed less than 50% of the survey and another 28 people had obvious random responding (e.g., circled entire columns of numbers, circled all 3's). These 80 people were filtered from all analyses, providing me with a final sample of $n = 648$ for hypothesis testing. This final sample included 324 women (50%), 294 men (45.4%), and 30 people (4.6%) who did not indicate their gender. With regard to racial background, there were 302 Caucasians (46.6%), 195 African Americans (30.1%), 26 Asian Americans (4%), 18 Hispanics (2.8%) and 63 people (9.7%) who were either biracial, international or responded "other" for racial background. Forty-four people (6.8%) did not indicate their race. Additional analyses with race dummy-codes included as covariates indicated that racial background did not influence the results reported below. Participants ages ranged from 18 to 70, with a mean of 36 years old ($s.d. = 12$).

The procedure employed (either by myself or by an Undergraduate Research Assistant) was for the researcher to politely approach adults who had just arrived in the MVA waiting areas and introduce herself and her affiliation with the University of Maryland. Next, the researcher told each customer, "We are here today conducting a study on interpersonal relations at work and we are asking people to fill out a survey about their experiences at their current jobs. Does this apply to you, and if so, would you be willing to fill out a survey about your job while you wait?" The question was asked in

this manner to allow unemployed people to self-select out of our sample by simply telling us that the survey does not apply to them. If the MVA customer agreed to be a participant, the researcher provided him or her with a survey, a clipboard, and a pen, and asked him or her to simply read the directions carefully and answer the questions in the survey. Participants were also instructed to return the survey directly to the researcher when they completed it. On average, it took participants approximately 30 minutes to complete the survey. When participants finished the surveys and returned them, the researcher thanked them and provided them with a debriefing form.

Pilot Study

Prior to beginning actual data collection with the procedure described above, I utilized similar procedures to conduct a pilot study to ensure that the survey materials and procedure were clear and did not provoke any confusion or problems for participants. I spent one day collecting data from participants ($n = 35$) at an MVA branch (Gaithersburg) using similar procedures to those described above, with one exception. After introducing myself and getting their consent to participate in the study, I indicated that this was my first day of data collection, and that I was particularly interested in their reactions to the survey. I asked each pilot participant to pay careful attention to the instructions and each of the items in the survey, and to circle any items that were unclear. I also asked them to either write notes in the margin and/or simply tell me about any problems that arose. When participants had completed their surveys, I asked them whether they found anything to be confusing or if there was anything that I could do to improve the survey.

The results of the pilot study indicated that virtually all of the participants reported that the survey instructions and items were very easily understood. None of the participants suggested any changes to specific survey items or to the instructions. Two participants suggested a formatting change so that the scale items were spaced further apart for ease of completion. I made this change to the final survey. One participant suggested that it would be nice to have a Spanish version of the survey. Due to the fact that the Hispanic population at the MVA branches was small, I opted against translating the survey and instead I added a question to the survey, “Is English the *first* language that you learned as a child?”, to be able to examine whether native English proficiency influenced the results. Additional analyses with this variable included as a covariate indicated that English as a first language did not influence the results reported below. Several participants indicated that the survey was interesting and that it was nice to have something to do to help pass the time while they were waiting. Based upon the positive reactions to the survey and procedures, I proceeded with my full data collection as described above.

Measures

The measures that were utilized in this research are presented in Appendix A.

Interpersonally Aggressive Acts at Work and Perpetrator Status. Glomb’s (2001; Glomb & Liao, 2003) Aggressive Experiences Scale (AES) was used to assess the frequency with which participants were targets of interpersonally aggressive acts at work. This measure was developed based upon in-depth interviews, Buss’s (1961) framework that classified behavioral forms of aggression, and previous theoretical and empirical work on workplace aggression (e.g., Folger & Baron, 1996; Neuman & Baron, 1998).

The scale consists of 20 behaviorally based items that reflect a range of interpersonally aggressive acts at work. Glomb (2001) extensively evaluated the factor structure of the measure and concluded that the scale is best considered as having a single dimension. Coefficients alpha for the scale across four samples in Glomb's research ranged from .86 to .95 (Glomb, 2001; Glomb & Liao, 2003). With regard to convergent and discriminant validity, the AES has been shown to relate significantly to variables that one would expect (e.g., organizational stress, anger) and be unrelated to variables that should be divergent (e.g., self-monitoring).

Perpetrator status (supervisor vs. coworker) was assessed as part of the measure of interpersonally aggressive acts at work. As can be seen in Appendix A, I administered two interpersonal aggression scales with identical items, but with different instructions that ask the respondent to refer to aggressive experiences from either supervisors or coworkers. One scale asked participants to respond to the question "How often has your *SUPERVISOR* engaged in this behavior and *YOU* were the target?" for each of the 20 interpersonally aggressive acts, and the other scale asked "How often has a *COWORKER* or *COWORKERS* engaged in this behavior and *YOU* were the target?" for each of the 20 interpersonally aggressive acts. Participants responded to the items on a response scale ranging from 1 (*never*) to 5 (*once a week or more*). The presentation of the supervisor and coworker aggression scales was counter-balanced (51.2% received supervisor scale first; 48.8% received the coworker scale first) and additional analyses with the order of presentation covaried indicated that it did not influence the results. Supervisor and coworker aggression scores were created by summing the 20 items that comprise each version of the scale, and a total aggression score was created by summing all 40 items

from both scales. A confirmatory factor analysis (reported below) found that each version of the scale was unidimensional, and that the total score had a clear 2-factor structure where the items loaded onto separate factors for supervisor versus coworker aggression. Coefficients alpha for aggression total, supervisor aggression, and coworker aggression in my sample were .94, .93, and .93 respectively.

Counterproductive Work Behaviors. CWB-I and CWB-O were assessed with a measure established by Bennett and Robinson (2000). While a handful of unpublished CWB measures exist, this measure was extensively validated and published, and because it assesses *both* interpersonally and organizationally-directed CWBs, it fits well with my model. The scale was established to assess workplace deviance, which has a definitional component of norm violations (see p. 12 above), yet because the items make no mention of norm violations, the measure is more appropriately considered a CWB scale. The final published scale has 19 items, but one item specific to ethnic, religious, and racial harassment was removed. Thus, as shown in Appendix A, I administered an 18-item scale, which has 6 CWB-I items and 12 CWB-O items. The directions asked participants to indicate the frequency with which they engaged in each of these acts over the previous year, on a response scale ranging from 1 (*never*) to 7 (*daily*). Items were summed to create a score for CWB-I and CWB-O, which had coefficient alphas of .78 and .81 respectively. A confirmatory factor analysis (reported below) supported this 2-factor structure. The subscales were correlated .46, suggesting that they are distinct but related aspects of CWB.

Organizational Citizenship Behaviors. I administered Lee and Allen's (2002) OCB-I and OCB-O scales to assess citizenship behaviors enacted. There is research indicating

the importance of separating OCBs into interpersonal and organizational dimensions, yet OCB subscales that have previously been employed to assess OCB-I (i.e., altruism) are problematic because they also contain items that tap OCB-O (McNeely & Melino, 1994). Therefore, Lee and Allen (2002) developed OCB-I and OCB-O subscales specifically with the purpose of differentiating OCBs according to the targeted beneficiary, which is consistent with my model as well. OCB-I and OCB-O were tapped by 8 items for each subscale. The directions asked participants to respond to the items indicated in Appendix A on a scale ranging from 1 (*never*) to 7 (*always*). Items were summed to create a score for each subscale. Coefficients alpha were .84 for OCB-I and .90 for OCB-O. A confirmatory factor analysis (reported below) supported this 2-factor structure. The subscales were correlated .51, thus they are distinct yet related aspects of OCB.

Work-Family Conflict. In order to assess participants' level of work-family conflict, I administered Netemeyer, Boles and McMurrin's (1996) work-family conflict scale, which is a 5-item measure that has good reliability and was extensively validated. In addition to the Netemeyer et al. (1996) scale, I included five additional items that were specifically aimed at tapping work-family conflict due to strain (as opposed to time pressure; c.f., Greenhaus & Beutell, 1985). Two of these additional items came from O'Driscoll, Ilgen and Hildreth (1992), and I wrote three of these items specifically for this study. Examples of these added items include "The demands of my job make it difficult to be relaxed all the time at home" and "Worry or concern over my work interferes with my non-work activities and interests." A key to the source of each item is provided in Appendix A. The directions asked participants to respond to the 10 items in

Appendix A on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). All items were summed to create a total work-family conflict score. Coefficient alpha was .95.

Job Search Behaviors. The job search behaviors scale consists of a 12-item scale by Blau (1994). These items ask respondents to indicate to what extent they have engaged in preparatory (e.g., prepared/revised your resume, talked with friends or relatives about possible job leads) and active (e.g., sent out resumes to potential employers, had a job interview) job search behaviors over the previous 6 months. Please see Appendix A for the items, which were summed to create a total score. Participants were asked to respond on a scale ranging from 1 (*never*) to 6 (*very frequently*). Coefficient alpha was .94.

Interpersonal Justice. Interpersonal justice has typically been measured with a specific focus upon interpersonal treatment received from authority figures during the enactment of formal procedures (Colquitt, 2001). However, my focus in this research is upon participants' evaluations of the fairness of interpersonal treatment received *in general* at work – i.e., everyday treatment, not only that enacted by supervisors during formal procedures. Most interpersonal justice measures focus specifically upon the narrow definition of interpersonal justice (e.g., Colquitt, 2001; Moorman, 1991; Niehoff & Moorman, 1993), so they are not appropriate for my model. I am aware of only one study of interpersonal justice that has adopted the broader, everyday-treatment approach to interpersonal justice, namely Donovan, Drasgow and Munson's (1998) validation study for the Perceptions of Fair Interpersonal Treatment (PFIT) scale. However, Donovan et al. (1998) conceptualized the PFIT as a climate scale, and an examination of the items reveals that the scale includes several interpersonally aggressive acts in addition to some fairness appraisal items, and it appears to be tapping some aspects of employee

voice and cohesion as well. Instead of using the PFIT, I chose to adapt Colquitt's (2001) 4-item measure of interpersonal justice and to also write additional items that reflect this construct. As can be seen in Appendix A, the 7 items assess the extent to which employees generally perceive that they are treated in an interpersonally fair manner (e.g., with respect, dignity, kindness, and consideration) at work. Participants were asked to respond to these behaviors on a scale ranging from 1 (*to a very small extent*) to 5 (*to a very large extent*). The results of reliability analysis revealed that item-total correlations for two items were low, and that alpha could be increased from .82 to .86 by dropping these two items. Thus, items 4 and 5 in Appendix A were removed from the final scale used in hypothesis testing. The other five items were summed to create a score for interpersonal justice. Coefficient alpha was .86.

Negative Affect at Work. State negative affect at work was assessed with the negative affect subscale of Watson, Clark and Tellegen's (1988) Positive and Negative Affect Scales (PANAS). As can be seen in Appendix A, the negative affect items consist of 10 adjectives indicative of negative affect. I was interested in negative affect at work rather than trait affectivity, therefore participants were asked to respond to the question "How often do you feel ___ *at work*?" on a scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely frequently*). All 10 items were summed to create a negative affect score. Coefficient alpha was .85.

Job Autonomy. Spector and Fox's (2003) Factual Autonomy Scale (FAS) was administered to measure the extent to which participants have autonomy and discretion at work. This scale was specifically designed to reduce the level of subjectivity in self-reports of job autonomy, and consistent with this, the scale includes items that ask

participants to report on the frequency of events in their current job (e.g., how often does someone tell you what to do?) and also how often they must ask permission to engage in a variety of behaviors (e.g., take a rest break, come late to work). As seen in Appendix A, the 7 items that assess whether employees have permission to do things are measured on a response scale ranging from 1 (*rarely*) to 5 (*extremely often or always*). The additional items that ask how frequently employees are told what to do, when, and how are measured on a response scale ranging from 1 (*never*) to 5 (*every day*). All 10 items were summed to create a total autonomy score. Coefficient alpha for the FAS was .87.

In addition to administering the FAS, I wrote four additional items that were aimed at assessing the amount of flexibility that employees have to structure how and with whom they work (please see Appendix A for the items). These items were added because the FAS items that focus upon asking permission may be less applicable to people in jobs at higher levels of the organizational hierarchy and/or professionals. However, the results of reliability analysis indicated that the alpha for these four additional items was extremely low ($\alpha = .24$) and that they had low item-total correlations with the FAS scale. Due to these results, these items were not added to the autonomy score. Instead, the FAS scale alone was used for hypothesis testing.

Job Mobility. To assess job mobility, I administered two items utilized by Tepper (2000). These items are “If I were to quit my job, I could find another job that is just as good,” and “I would have no problem finding an acceptable job if I quit.” Participants responded to these two items on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The items were summed for the mobility score. Coefficient alpha was .81.

Dispositional Hostility. I assessed dispositional hostility by administering Watson and Clark's (1992) PANAS-X hostility scale (c.f., Bagozzi, 1993). As can be seen in Appendix A, this scale consists of six adjectives indicative of hostility, and participants were asked to respond to the question "How often do you *generally* feel ____" on a scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely frequently*). The six items were summed to create a score, and the scale had a coefficient alpha of .92.

Neuroticism. Neuroticism was assessed with Goldberg's (1999) emotional stability 10-item scale, which was coded such that high means on this scale were indicative of neuroticism rather than emotional stability. Participants were directed to indicate how accurately each of the 10 items in Appendix A described themselves, on a scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*). Their responses were summed to create a neuroticism score, which had a coefficient alpha of .88.

Covariates. It was essential for me to include several covariates in my analyses, as interpersonal aggression is one of many organizational stressors that can influence the enactment of various behavioral responses (Kahn & Byosiére, 1992). I was only interested in interpersonal aggression and its subsequent psychological processes and behavioral outcomes, thus I controlled for several other factors that have been shown to predict similar processes and outcomes. More specifically, previous research has shown that the behavioral outcomes of interest (CWBs, OCBs, job search behaviors, work-family conflict) are associated with a range of variables including organizational stressors, several types of organizational justice, and person or dispositional characteristics. Thus, I conducted a strict test of my hypotheses by controlling for several

of these factors. Each of these covariate measures is described below and can be seen in Appendix A.

First, I included a broad measure of organizational constraints that taps Peters and O'Connor's (1980) 11 areas of constraints at work that interfered with job performance (Spector & Jex, 1998). These constraints are essentially other organizational stressors (e.g., lack of equipment or supplies, inadequate training) that could also be accounting for the observed effects, thus these stressors were covaried. I administered Spector and Jex's (1998) 11-item measure of organizational constraints, which employs a response scale ranging from 1 (*less than once a month or never*) to 5 (*several times per day*). Items were summed to create the total score. Coefficient alpha was .90.

Second, I included measures of both distributive and procedural justice (Colquitt, 2001), which have been associated with organizational citizenship behaviors (Colquitt et al., 2001; Tepper, 2000) and to a lesser extent, with counterproductive work behaviors (Zellars et al., 2002). The Colquitt (2001) distributive justice scale consists of 4 items, and the procedural justice scale includes 7 items, both of which are assessed on a scale ranging from 1 (*to a very small extent*) to 5 (*to a very large extent*). Items for each scale were summed to create these two justice scales. Coefficient alpha was .94 for distributive justice and .92 for procedural justice.

Third, as noted above, employees' dispositional level of hostility has been shown to be a robust predictor of engaging in CWBs (Douglas & Martinko, 2001). Therefore, I controlled for hostility in all analyses *except* for when it was examined as a moderator of the proposed relationships (i.e., Hypothesis 9). As described above, the Watson and Clark (1992) PANAS-X hostility scale had a coefficient alpha of .92.

Fourth, employees' actual level of workload has been shown to influence behavioral strain responses (Spector & Jex, 1998). I administered the Spector and Jex (1998) quantitative workload scale, which assesses the amount of work and work pace, and controlled for it in all analyses. The scale consists of 5 items, which participants completed on a scale ranging from 1 (*less than once a month or never*) to 5 (*several times per day*). The items were summed for a total score, which had a coefficient alpha of .87.

Fifth, I controlled for participant age, gender and tenure in all of my analyses. There is some limited evidence that age and tenure may be related to experiences of interpersonal aggression (Glomb & Liao, 2003; Hoel et al., 1999), and the results for the relationship between gender and experiencing interpersonal aggression are mixed and inconclusive (Keashly & Harvey, forthcoming). Gender and age were assessed with two questions, which simply asked "What is your gender?" and "What is your age?" I planned to control for organizational tenure, but also assessed other forms of tenure to ensure that they were consistent. Specifically, four types of tenure were assessed. Participants were asked how many years and months that they had been 1) employed by the organization where they work, 2) employed in their current job, 3) working under their current supervisor, and 4) working with most of the co-workers in their current work group/unit? Correlations among these four types of tenure were high (r 's = .60-.70), therefore organizational tenure was chosen. Tenure was scored as the number of years with an organization, with the fractions of each year converted to decimal equivalents (e.g., 3 years, 3 months = 3.25 years). Also recall that although I did not include race as a covariate, I ran additional analyses with race covaried and it did not impact the results.

Finally, in order to reduce the possibility that my findings are due to response biases (as discussed in greater detail in the next section), I assessed each participant's degree of socially desirable responding and covaried this indicator of response bias from all analyses. I administered the Reynolds (1982) 13-item short form of the Marlowe-Crowne social desirability scale (Crowne & Marlowe, 1960). Responses to the scale were summed for a total score. It should be noted that this scale is coded such that high means indicate a *low* level of social desirability. Coefficient alpha was .66.

In sum, by utilizing organizational constraints, distributive justice, procedural justice, hostility, workload, participant age, gender, tenure, and social desirability, I reduced the influence of variables other than interpersonal aggression in my model, and therefore have increased confidence that the observed effects are due to interpersonal aggression.

Scale Ordering in Survey. The survey was constructed such that the measure of interpersonally aggressive experiences came *after* assessments of behaviors at work, interpersonal justice and negative affect. Behavioral outcomes were administered first, followed by psychological processes, and then interpersonal aggression experiences. The covariates were spread throughout the survey. This was done to keep respondents from having their negative experiences primed before responding to questions about their psychological processes and behaviors, in an effort to reduce concerns about response biases (see below for a detailed discussion of response biases). More specifically, as can be seen in Appendix A, the order of the scales in the survey was as follows: 1) OCBs, 2) work-family conflict, 3) CWBs, 4) job search behaviors, 5) negative affect at work, 6) interpersonal justice, 7) interpersonal aggression from supervisor or coworker (counter-balanced), 8) quantitative workload, 9) interpersonal aggression from supervisor or

coworker (counter-balanced), 10) job autonomy, 11) distributive justice, 12) procedural justice, 13) organizational constraints, 14) dispositional hostility, 15) neuroticism, 16) job mobility, 17) social desirability, and 18) demographics.

Single-Source Method Bias

The nature of the research questions in this dissertation necessitated that I gather data on multiple constructs from a single employee, yet one concern with using self-report measures of multiple constructs from a single respondent is common methods or single-source bias (Campbell & Fiske, 1959; Doty & Glick, 1998; Podsakoff & Organ, 1986; Spector, 1987). This bias would be present if inflated correlations between constructs were observed simply due to the fact that the same source (respondent) was used to gather the data. Despite the fact that single source bias is a ubiquitous concern of organizational scholars, the existing research has produced conflicting results regarding whether or not it is a serious problem or whether it even exists (Crampton & Wagner, 1994; Doty & Glick, 1998; Spector, 1987). One author concluded that single-source bias “may in fact be mythical” (Spector, 1987, p. 442) and others have concluded that it “may be more the exception than the rule in microresearch in organizations” (Crampton & Wagner, 1994, p. 72). Even if single-source bias is evident, however, this does not necessarily invalidate research findings; Doty and Glick (1998) found evidence for common methods bias, yet it was not strong enough to challenge conclusions about the direction and significance of relationships in the majority of cases.

Fox and Spector (1999) discussed concerns with utilizing self-report data in research on counterproductive work behaviors, and suggested that researchers should address three questions when considering self-report methodology: 1) How appropriate is self-

report for measuring the particular constructs of interest in the context of the particular study? 2) Would alternative measures do a better job of measuring those constructs, or come up with different results? and 3) Are there practical and/or ethical considerations that would prohibit the use of alternative measures? I addressed each of these questions in turn below.

First, some research questions must be investigated from an employee's own point of view, and to avoid investigations of important research questions simply because they necessitate the use of self-report measures is nonsensical. With regard to the current model, self-report methodology was an appropriate way to assess all constructs in the model, and for most of the constructs, my research questions *required* that the targets of aggression report on their own perceptions and experiences. No other respondent could possibly have access to one's own memories, cognitions, and emotions to be able to report on one's interpersonally aggressive experiences, interpersonal justice perceptions, negative affect, turnover intentions or work-family conflict.

Second, regarding alternative sources for measuring constructs, some research has used peer or supervisor reports of CWBs (e.g., Penney & Spector, 2003; Skarlicki & Folger, 1997), yet peer assessments of CWBs are criterion deficient in that peers or supervisors may only see a small fraction of the CWBs that are performed (e.g., they do not know that the target employee stole supplies, dragged out work to get overtime, or lied about travel expenses). In the one study that assessed both self and peer ratings of CWBs (with an anonymous survey), the correlation between these ratings was low ($r = .22$; Penney & Spector, 2003), which suggests that peers are not fully aware of one's own CWBs and thus self-reports may be more accurate.

The third and final question deals with practical and/or ethical considerations that prohibit the use of alternatives to self-report data. In this research, I guaranteed participants full anonymity and the data were collected outside of their organizational context in order to enhance participants' honesty and openness about their perceptions and experiences. If, after having promised participants complete anonymity, I had asked them to take a survey to work to have a coworker or a supervisor report on their levels of OCBs and/or CWBs, many participants may perceive this as invasive and as a violation of their anonymity (because I would have needed to put contact information or a code on the surveys to match them). In addition, such a method would likely result in a low response rate because it does not permit the use of any strategies that improve response rates (i.e., advance notice, follow-up reminders; Roth & BeVier, 1998). Thus, if I had attempted to gather data on CWBs and OCBs from peer assessments, low response rates would likely have necessitated that I conduct primary evaluations of the model based upon participants' self-reports of their CWBs and OCBs anyway.

Based upon the above considerations, I believe that the use of self-report methodology to assess the constructs in my model was warranted, yet I also recognized the need to utilize procedures to minimize this potential bias. In particular, I adopted both design and procedural methods outlined by Podsakoff and Organ (1986) to reduce the potential impact of single-source bias. First, as noted above in the covariate measures' descriptions, socially desirable responding has been examined as a potential source of common methods bias (e.g., Nunnally, 1978; Spector, 1987) where social desirability response sets would lead participants to choose the most socially appropriate response, regardless of their true perceptions of feelings. Based upon Podsakoff and

Organ's (1986) suggestions, I assessed each participant's degree of socially desirable responding and then covaried this measure from all analyses. Second, related to Podsakoff and Organ's (1986) discussion of scale trimming, I ensured that any items that constitute obvious overlap between two purportedly distinct constructs were eliminated. I chose measures that are very distinct, where the items are clearly related to the construct of interest and not to other constructs in my model. To the greatest extent possible, I also chose measures that are behaviorally- (e.g., Bennett & Robinson, 2000; Glomb, 2001; Lee & Allen, 2002) or factually-based (Spector & Fox, 2003) to minimize subjectivity in responses. Third, based upon evidence that the introduction of a new scaling format can interrupt respondents routinized responding and actually require them to play close attention to the questions that they're answering (Gardner, Cummings, Dunham & Pierce, 1998), each new construct was introduced with new instructions and a new scale that corresponds with that measure's anchors. Finally, as described in detail above, the ordering of the scales in the survey was designed to minimize priming of negative work-related experiences prior to asking questions about psychological processes and behaviors. In sum, these procedural and design methods help to reduce concerns about single-source bias, and thus provide increased confidence in the results. It will be important for future research to examine the proposed relationships through experimental methods that prioritize internal validity (for making causal inferences) and reduce single-source bias concerns, rather than prioritizing external validity, as I did here.

Summary

The methodology for this study involved administering a survey to a broad sample of working adults waiting at Maryland Motor Vehicle Administration branches. Such a

broad sample ensured that the external validity of the results would be high and not dependent upon the particular dynamics found in a single organization. The measures included in the survey were all validated scales with good reliabilities and validities shown in previous research. I also took several steps to reduce the impact of single-source bias. I now turn to a discussion of the analyses and results of the current study.

CHAPTER 4 -- ANALYSES AND RESULTS

Overview

The analyses for this study consisted of first examining the factor structures and reliabilities for all scales, followed by an examination of descriptive statistics and correlations, and then conducting tests of hypotheses with hierarchical linear regressions and with structural equation modeling (SEM). The presentation of the results below follows this general plan. More specifically, the main effects of interpersonal aggression on behavioral outcomes (Hypotheses 1 – 4) were tested with linear regressions. Next, the mediational role of interpersonal justice and negative affect (Hypotheses 5 – 6) were tested with mediational regression analysis (Baron & Kenny, 1986; Kenny, Kashy & Bolger, 1998). The moderating impact of the continuous variables of job autonomy, job mobility, dispositional hostility and neuroticism was then evaluated through moderated regression analyses. In an effort to link the results of the mediational and moderated regression results, and thereby link interpersonal aggression to the behavioral outcomes through the interactions found, moderated mediation regression analyses were also conducted (Kenny, 2004; Michie, Dooley & Fryxell, 2002). Finally, the supervisor versus coworker perpetrator status moderator was evaluated through moderated SEM. This was due to the categorical nature of the variable that made this possible, whereas the other moderators were continuous in nature.

Exploratory Factor Analysis, Confirmatory Factor Analyses, & Reliabilities

Exploratory Factor Analysis for Interpersonal Aggression at Work. The interpersonal aggression scale that I utilized in this research was relatively new to the literature (Glomb, 2002; Glomb & Liao, 2003), therefore I began by conducting

exploratory factor analyses on its items to determine whether it should indeed be considered a unidimensional scale. As reviewed above, Buss (1961) had originally proposed three bipolar dimensions of aggression. Glomb (2002) explored whether her AES scale would fit with Buss's original hypothesized dimensions of aggression. However, her results provided little support for the three bipolar dimensions and instead provided strong support for a unidimensional solution. Recall that in this dissertation, I administered two different versions of the AES, which I refer to as supervisor aggression and coworker aggression. I expected that consistent with Glomb's previous work on this scale, the supervisor and the coworker aggression AES scales would each be unidimensional, and thus the total aggression scale would evidence 2 factors that were divided only with regard to the source of the aggressive acts (i.e., supervisor vs. coworker).

I began by randomly selecting 50% of my participants to use for this exploratory factor analysis; the other 50% were used to confirm the factor structure (reported below). The data for the 40 items comprising the total aggression score were subjected to a maximum likelihood exploratory factor analysis with varimax rotation. The results revealed that there were 7 possible factors identified with eigenvalues over 1. The first two factors were strongest (19% and 13% of variance after rotation, respectively) and the rest were much weaker (7% or less). An examination of the scree plot indicated that a 2-factor solution was most likely. The rotated factor matrix revealed that the first two factors had the vast majority of the items and that the factors were divided between coworker and supervisor items. Based upon the scree plot, the rotated factor matrix, and the variance accounted for in the first 2 factors, I chose to impose a 2-factor solution on

the data. The results of the second factor analysis with 2 factors imposed evidenced a very clear split between supervisor and coworker items. All items supervisor aggression items fell onto the first factor and all coworker aggression items fell onto the second factor. There were no cross-loadings greater than .20. These results provide initial support for the aggression scales' 2-factor (supervisor versus coworker) structure, yet this structure was also examined through confirmatory factor analysis.

Confirmatory Factor Analyses for All Scales. The factor structures of each scale were examined through confirmatory factor analysis conducted with Mplus. Individual items tend to have low reliabilities and often violate the assumptions of multivariate normality, and thus it is often preferable to conduct CFAs on homogeneous item clusters or “parcels” instead of using individual items as indicators (Bandalos, 2002; Nesser & Wisenbaker, 2003). In line with this recommendation, I conducted CFA analyses with item parcels for each scale that had at least 8 items (i.e., had at least four 2-item parcels). The parcels were created based upon classical test theory item statistics (i.e., item-total correlations) such that each parcel was balanced with others for a given scale. Two-item parcels were used for scales that were moderately long (i.e., between 8 and 12 items) and four-item parcels were used for longer scales (i.e., 20-item scales). For scales that had 7 items or less, it was necessary to use individual items as indicators because CFA models without at least 4 parcels are either just-identified or under-identified and thus cannot run. These shorter scales where individual items were used instead of parcels include interpersonal justice, hostility, distributive justice, procedural justice, and quantitative workload. Note that a CFA could not be run for job mobility because the scale only consisted of two items.

Table 1 - Confirmatory Factor Analysis Results

Scale	Factors Confirmed	Chi-Square (df)	SRMR	RMSEA	CFI
Aggression Total	2 (Supervisor & Coworker)	65.74 (34)	.03	.05	.99
CWBs	2 (Indiv. & Org.)	164.04 (26)	.05	.09	.93
OCBs	2 (Indiv. & Org.)	99.66 (19)	.04	.08	.97
Work-Family Conflict	1	50.16 (5)	.01	.12	.99
Job Search Behaviors	1	49.34 (9)	.02	.08	.99
Negative Affect at Work	1	3.02 (5)	.01	.00	1.00
Interpersonal Justice ^a	1	26.94 (5)	.02	.08	.99
Job Autonomy	1	170.11 (5)	.05	.23	.92
Dispositional Hostility	1	211.91 (9)	.04	.19	.93
Neuroticism	1	44.66 (5)	.03	.11	.98
Org. Constraints	1	151.54 (5)	.04	.22	.93
Distributive Justice	1	5.32 (2)	.01	.05	1.00
Procedural Justice	1	254.29 (14)	.06	.17	.92
Quantitative Workload	1	203.31 (5)	.06	.25	.88
Social Desirability	1	24.75 (9)	.03	.05	.95

CWBs = counterproductive work behaviors; OCBs = Organizational citizenship behaviors; df = degrees of freedom; CFI = comparative fit index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Squared Residual
a = after removing items #4 and 5

The CFA results for all scales can be seen in Table 1. This table contains several different indications of model fit including Chi-square and its associated degrees of freedom, the comparative fit index (CFI), the root mean square error of approximation (RMSEA) index, and the standardized root mean squared residual (SRMR) index. The chi-square statistic is biased against large sample sizes and as such, scholars typically recommend that several different fit indices be reported (including absolute, parsimonious and incremental fit indices; Kline, 1998; Mueller & Hancock, 2001), and

that researchers make decisions about the adequacy of model fit based upon multiple statistics. The SRMR statistic is an example of an absolute fit index (where fit gets better as the model gets more complex), and values less than .10 are typically considered appropriate for acceptable fit. The RMSEA is an example of a parsimonious fit index (which take into consideration the complexity of the model when determining fit), and values less than .10 are indicative of acceptable fit. Finally, the CFI is an incremental fit index (which compares the model against a null model), and CFI values greater than .90 have traditionally been considered acceptable fit (Mueller & Hancock, 2001).

An examination of the fit statistics in Table 1 for the aggression scale indicated that the 2-factor solution for aggression total that emerged in exploratory factor analysis provided good fit to the data. Recall that this CFA for aggression was run on a random 50% sample of my data, and thus the data used in the exploratory factor analysis did not overlap at all with the data used for this confirmatory model. To ensure that the two-factor model fit significantly better than a one-factor model, I conducted a chi-square difference test. The chi-square and df for a one-factor CFA for aggression were 789.81 and 35 respectively. The difference between the chi-square values for two models was 724.07, with 1 degree of freedom. The critical value for chi-square with 1 df and $p < .05$ is 3.84, and since the chi-square difference value exceeds this critical value, the 2-factor model fits the aggression data significantly better than the 1-factor model.

I also conducted chi-square difference tests to verify that CWBs and OCBs should both be treated as having two factors. For CWBs the chi-square and df for a one-factor model for were 506.91 and 27 respectively. The difference between the chi-square values for two models was 342.87, with 1 df. This value exceeds the critical value of

3.84 (for $p < .05$ with 1 df), thus the data support the 2-factor model for CWBs. For OCBs, the chi-square for a one-factor model was 710.69 with 20 df. The difference between the one- and two-factor models for OCBs was 611.03, with 1 df. Again, this value exceeded the critical value of 3.84, thereby supporting the two-factor solution.

The results displayed in Table 1 indicate that the main constructs in my model (i.e., CWBs, OCBs, work-family conflict, job search behaviors, interpersonal justice, negative affect) all had good fit, with SRMR values less than .10, RMSEA values less than .10 and CFI values greater than .90. The moderators and covariates all also had values of .10 for SRMR, and all scales except quantitative workload had values of .90 or greater for CFI (and quantitative workload had a value of .88). The RMSEA fit statistic was greater than .10 for three of my proposed moderators and for three of the covariates. Although it is preferable for all fit indices to agree on a model's level of fit, it is often the case that different fit statistics come to different conclusions because they reflect different aspects of fit (Kline, 1998). In such cases, the researcher must make judgment calls about what defines acceptable fit. Given that two of the three fit statistics reported indicate acceptable levels of fit for these scales, and that these scales are all published measures that have been validated and are frequently used, I concluded that all of the research scales had fit that was acceptable enough to proceed with the analyses.

Reliability Analysis. Coefficients alpha and item-total correlations were run for each of the scales in this dissertation. As can be seen in Table 2 below, the coefficients alpha were acceptable. I examined the item-total correlations of all items in each of the scales to determine whether reliability could be improved by removing any items. The results revealed that alpha would only increase if items were deleted from one scale, namely

interpersonal justice. As described in the method section, item-total correlations for items #4 and 5 were low, and alpha could be increased from .82 to .86 by dropping these items. These items were removed from the final interpersonal justice scale.

Descriptive Statistics and Correlations

Means, standard deviations, the number of items in each scale, and the number of participants with data for each scale can also be seen in Table 2. The frequencies for each interpersonal aggression at work item by perpetrator and overall incidence for both scales combined can be seen in Table 3. Eighty percent of the participants endorsed at least one incident of aggression (regardless of perpetrator). For supervisor aggression, 59% reported at least one aggressive incident, whereas 73% reported at least one coworker aggression incident. The incidence rates for mild forms of aggression (e.g., withholding information, avoiding) were between 50-60%, which was slightly lower than the 60-70% found by Glomb (2001). For the most severe forms of aggression (e.g., physical assault, damaging property), rates were less than 10% in my sample, and were less than 12% in Glomb's (2001) sample. It should be noted that Glomb's samples were comprised of employees at two manufacturing companies (machining and sporting goods), and employees at a university who had chosen to attend a training session on violence at work, thus her samples may have had higher levels of aggression than would be found among a more representative sample such as the one in this study. The general pattern of results was the same such that the forms of aggression that were found to occur most frequently in this data were also the forms of aggression that were most prevalent in Glomb's study in which the AES was validated.

With regard to specific patterns of results, it appears that aggressive behaviors that could be considered indirect and/or passive are those that occurred most frequently in this sample, with incidence rates around 50% or higher. Examples include “withholding information,” “avoiding you,” and “making you look bad.” The least frequently endorsed forms of aggression seemed to be those that involved physical harm, including “physically assaulting you” (4% endorsed) and “damaging property” (6% endorsed). Most items that were active and aimed at the target directly, yet were non-physical (either verbal or non-verbal) seemed to be of moderate frequency, with approximately 20-30% incidence. Examples included “swearing at you,” “using hostile body language,” “belittling your opinions in front of others,” and “getting ‘in your face’.” The incidence of supervisor aggression was less than the level of coworker aggression for nearly all items (with the exception of “making threats”), yet both scales evidenced similar patterns such that the most frequent coworker aggression items were also the most frequent supervisor aggression items, and so forth. Overall, the pattern of frequencies observed in Table 3 reveal that there was a range of incidence rates for the individual aggressive acts that seem to differ in a predictable manner and that the supervisor and coworker scales have similar patterns of responses, albeit with coworker aggression occurring more frequently.

Intercorrelations between all variables in this dissertation can be seen in Table 4.

Table 2 - Means, Standard Deviations and Scale Reliabilities

Scale	Number of items in scale	Sample Size	Mean	Standard Deviation	Coefficient Alpha
Aggression Total	40	646	54.97	20.04	.94
Supervisor Aggression	20	630	26.71	11.19	.93
Coworker Aggression	20	641	29.14	11.68	.93
CWBs–Individual	6	646	11.71	6.42	.78
CWBs–Organizational	12	646	20.57	8.83	.81
OCBs–Individual	8	642	41.17	7.72	.84
OCBs–Organizational	8	642	40.94	8.77	.90
Work-Family Conflict	10	642	38.70	15.27	.95
Job Search Behaviors	12	645	23.35	11.25	.94
Negative Affect at Work	10	647	17.38	6.43	.85
Interpersonal Justice	5	647	20.49	3.92	.86
Job Autonomy	10	646	35.98	9.87	.87
Job Mobility	2	622	6.57	2.36	.81
Dispositional Hostility	6	633	10.15	4.95	.92
Neuroticism	10	628	24.36	8.67	.88
Org. Constraints	11	635	20.63	8.89	.90
Distributive Justice	4	631	11.87	5.02	.94
Procedural Justice	7	625	20.98	7.49	.92
Quantitative Workload	5	643	17.29	5.50	.87
Social Desirability	13	620	17.01	2.76	.66
Age	1	595	35.93	11.65	--
Gender	1	618	1.48	.50	--
Tenure with Organization	1	614	6.11	7.47	--

CWBs = counterproductive work behaviors; OCBs = Organizational citizenship behaviors. Gender coded such that 1=female, 2=male.

Table 3 -- Frequencies of Experienced Aggression by Perpetrator Status

	Supervisor Aggression					Coworker Aggression					Both
	Never	1 or 2 Times A Year	3 or 4 Times A Year	About Once A Month	Once A Week or More	Never	1 or 2 Times A Year	3 or 4 Times A Year	About Once A Month	Once A Week or More	
1. Making angry gestures (e.g., pounding fist, rolling eyes)	73	14	4	4	5	62	23	6	5	4	47
2. Avoiding you	71	14	5	5	5	59	24	9	5	4	50
3. Making you look bad	74	14	5	3	4	62	24	8	5	2	47
4. Yelling or raising their voice	74	14	5	4	4	65	20	6	5	3	44
5. Withholding information from you	59	20	8	6	7	53	25	11	6	5	59
6. Sabotaging your work	90	5	2	1	1	79	13	4	3	1	24
7. Swearing at you	87	7	3	2	2	79	10	5	2	3	27
8. Withholding resources (e.g., supplies, equipment) needed to do your job	83	9	4	3	1	77	12	5	4	2	29
9. Physically assaulting you	98	1	1	0	0	97	2	1	1	0	4
10. Using hostile body language	90	5	2	1	2	82	12	3	2	1	22
11. Insulting or criticizing you (including sarcasm)	75	13	5	4	3	62	22	8	4	4	45
12. Failing to correct false information about you	82	11	4	1	2	73	16	5	3	3	32
13. Interrupting or “cutting you off” while speaking	63	20	7	6	5	52	22	14	6	7	57
14. Getting “in your face”	88	7	2	1	1	83	9	5	2	1	23
15. Spreading rumors	91	5	2	1	1	70	18	7	2	3	32
16. Making threats	90	5	3	1	1	91	6	2	1	1	15
17. Damaging property	98	1	1	0	0	95	4	1	1	0	6
18. Whistle-blowing or telling others about your negative behavior	88	7	3	1	2	80	13	4	2	1	24
19. Belittling your opinions in front of others	81	11	4	2	2	75	14	5	4	2	32
20. Giving you the “silent treatment”	81	9	4	3	3	69	18	7	2	3	37

Tabled values are percentages of the sample.

Table 4 – Correlation Matrix for All Variables

		1	2	3	4	5	6	7	8
1	Aggression Total	1.0							
2	Supervisor Aggression	.84**	1.0						
3	Coworker Aggression	.85**	.46**	1.0					
4	CWBs– Individual	.29**	.21**	.29**	1.0				
5	CWBs– Organizational	.32**	.27**	.28**	.46**	1.0			
6	OCBs– Individual	.06	.06	.04	.01	-.03	1.0		
7	OCBs– Organizational	-.05	-.03	-.06	-.09*	-.19**	.51**	1.0	
8	Work-Family Conflict	.26**	.25**	.24**	.07	.03	.04	.08	1.0
9	Job Search Behaviors	.21**	.20**	.17**	.07	.17**	.07	-.16**	.09*
10	Negative Work Affect	.40**	.34**	.39**	.19**	.22**	.00	-.05	.35*
11	Interpersonal Justice	-.48**	-.40**	-.42**	-.16**	-.18**	.20**	.32**	-.14**
12	Job Autonomy	-.21**	-.23**	-.17**	-.16**	-.22**	-.00	.12**	-.11**
13	Job Mobility	.03	.00	.05	.07	.06	.06	.05	.00
14	Dispositional Hostility	.43**	.34**	.44**	.30**	.26**	-.02	-.10**	.33**
15	Neuroticism	.31**	.24**	.32**	.19**	.20**	-.04	-.16**	.31**
16	Org. Constraints	.48**	.40**	.46**	.15**	.24**	.05	-.06	.34**
17	Distributive Justice	-.18**	-.20**	-.09*	-.05	-.15**	.06	.26**	-.14**
18	Procedural Justice	-.26**	-.27**	-.17**	-.07	-.14**	.11**	.33**	-.16**
19	Quantitative Workload	.16**	.12**	.16**	.08	-.00	.10*	.10*	.40**
20	Social Desirability	.12**	.11**	.12**	.22**	.34**	-.09*	-.09*	.19**
21	Age	-.07	-.06	-.06	-.29**	-.26**	.08	.18**	.07
22	Gender	.05	.06	.05	.15**	.07	-.11**	.02	.07
23	Org. Tenure	-.04	-.05	-.03	-.08	-.13**	.12**	.17**	.02

CWBs = counterproductive work behaviors; OCBs = Organizational citizenship behaviors. Gender coded such that 1=female, 2=male.

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

Table 4 continued

		9	10	11	12	13	14	15	16
1	Aggression Total								
2	Supervisor Aggression								
3	Coworker Aggression								
4	CWBs– Individual								
5	CWBs– Organizational								
6	OCBs– Individual								
7	OCBs– Organizational								
8	Work-Family Conflict								
9	Job Search Behaviors	1.0							
10	Negative Work Affect	.21**	1.0						
11	Interpersonal Justice	-.19**	-.34**	1.0					
12	Job Autonomy	-.17**	-.22**	.23**	1.0				
13	Job Mobility	.12**	-.04	.05	.07	1.0			
14	Dispositional Hostility	.20**	.64**	-.33**	-.23**	.01	1.0		
15	Neuroticism	.15**	.49**	-.27**	-.17**	-.02	.57**	1.0	
16	Org. Constraints	.25**	.40**	-.33**	-.26**	.08*	.39**	.34**	1.0
17	Distributive Justice	-.17**	-.13**	.29**	.15**	.02	-.12**	-.13**	-.23**
18	Procedural Justice	-.16**	-.18**	.39**	.24**	.09*	-.18**	-.21**	-.29**
19	Quantitative Workload	.09*	.24**	-.07	-.16**	.08*	.21**	.15**	.36**
20	Social Desirability	.01	.25**	-.10*	-.10*	-.06	.28**	.36**	.11**
21	Age	-.26**	-.12**	.16**	.25**	-.04	-.16**	-.17**	-.12**
22	Gender	-.11**	-.08	-.04	.10*	-.02	.01	-.12**	.05
23	Org. Tenure	-.25**	-.11**	.09*	.19**	-.08	-.09*	-.11**	-.09*

CWBs = counterproductive work behaviors; OCBs = Organizational citizenship behaviors. Gender coded such that 1=female, 2=male.

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

Table 4 continued

	17	18	19	20	21	22	23
1 Aggression Total							
2 Supervisor Aggression							
3 Coworker Aggression							
4 CWBs– Individual							
5 CWBs– Organizational							
6 OCBs– Individual							
7 OCBs– Organizational							
8 Work-Family Conflict							
9 Job Search Behaviors							
10 Negative Work Affect							
11 Interpersonal Justice							
12 Job Autonomy							
13 Job Mobility							
14 Dispositional Hostility							
15 Neuroticism							
16 Org. Constraints							
17 Distributive Justice	1.0						
18 Procedural Justice	.67**	1.0					
19 Quantitative Workload	-.04	-.01	1.0				
20 Social Desirability	-.07	-.06	.00	1.0			
21 Age	.11**	.08	-.09*	-.05	1.0		
22 Gender	-.01	.01	-.05	.02	-.03	1.0	
23 Org. Tenure	.08*	.09*	-.03	-.03	.52**	.07	1.0

CWBs = counterproductive work behaviors; OCBs = Organizational citizenship behaviors. Gender coded such that 1=female, 2=male.

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

Main Effects for Interpersonal Aggression Predicting Behavioral Outcomes

The main effects of interpersonal aggression predicting behavioral outcomes were evaluated using hierarchical linear regressions. The nine covariates (i.e., dispositional hostility, organizational constraints, distributive justice, procedural justice, quantitative workload, social desirability, age, gender, and organizational tenure) were entered as the first step in each regression. The second step was the total aggression score. The results of these analyses can be seen in Table 5 below. Note that Table 5 contains the results of separate regressions for the main effects of interpersonal justice and negative affect on each behavioral outcome, in addition to the results for interpersonal aggression. The results for these psychological processes' relationships with the behaviors will be discussed in the mediation section below.

In Hypothesis 1, I proposed that interpersonal aggression experience at work would be positively related to a) CWB-I and b) CWB-O. As seen in Table 5, interpersonal aggression was indeed significantly positively related to CWB-I ($\beta = .22$, $\Delta R^2 = .03$, $p < .01$) and CWB-O ($\beta = .21$, $\Delta R^2 = .03$, $p < .01$) above and beyond the covariates entered in the first step. Thus, Hypothesis 1 was supported.

For Hypothesis 2, I proposed a negative relationship between interpersonal aggression at work and both a) OCB-I and b) OCB-O. The results displayed in Table 5 indicate that neither OCB-I ($\beta = .07$, $\Delta R^2 = .00$, *ns*) nor OCB-O ($\beta = .04$, $\Delta R^2 = .00$, *ns*) was significantly related to interpersonal aggression. There was no support for Hypothesis 2.

Table 5 - Regressions of Behavioral Outcomes on Aggression and Psychological Processes

Predictors	Behavioral Outcomes											
	CWBs-I		CWBs-O		OCBs-I		OCBs-O		Work Family Conflict		Job Search Behaviors	
	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²
Step 1		.21**		.21**		.07**		.16**		.30**		.16**
Dispositional Hostility	.19**		.08		-.06		-.06		.18**		.13**	
Org. Constraints	.03		.17**		.11*		.04		.07		.16**	
Distributive Justice	.04		-.06		.02		.09		-.05		-.05	
Procedural Justice	.00		.00		.11		.24**		-.07		-.05	
Quantitative Workload	.04		-.10*		.08		.13**		.38**		-.01	
Social Desirability	.17**		.26**		-.09*		-.06		.12**		-.05	
Age	-.29**		-.22**		-.01		.10*		.16**		-.14**	
Gender	.13**		.05		-.11**		.02		.08*		-.11**	
Org. Tenure	.11*		.02		.13**		.08		-.04		-.13**	
Step 2												
Aggression Total	.22**	.03**	.21**	.03**	.07	.00	.04	.00	.06	.00	.10*	.01*
Step 2												
Interpersonal Justice	-.03	.00	-.04	.00	.21**	.03**	.25**	.05**	.00	.00	-.05	.00
Step 2												
Negative Work Affect	.00	.00	.05	.00	-.02	.00	.05	.00	.12*	.01*	.10	.01

CWBs-I = counterproductive work behaviors—individual; CWBs-O = counterproductive work behaviors—organizational; OCBs-I = organizational citizenship behaviors—individual; OCBs-O = organizational citizenship behaviors—organizational. Gender coded such that 1=female, 2=male.

Tabled values are standardized beta weights. Values were rounded to 2 decimals, so some rounding error is reflected above.

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

Hypothesis 3 proposed a positive relationship between interpersonal aggression at work and levels of work-family conflict. The results demonstrate that interpersonal aggression at work was not significantly related to work-family conflict ($\beta = .06$, $\Delta R^2 = .00$, *ns*). Therefore, Hypothesis 3 was not supported.

For the final main effect hypothesis (Hypothesis 4), I proposed that interpersonal aggression at work would be positively related to job search behaviors. As seen in Table 5, interpersonal aggression was indeed positively related to job search behaviors ($\beta = .10$, $\Delta R^2 = .01$, $p < .05$) after controlling for the numerous covariates entered in the first step. Thus, Hypothesis 4 was supported.

In addition to the results presented above where the covariates was entered as the first step in each regression equation, I explored whether interpersonal aggression at work was significantly related to each of the behavioral outcomes *without* any covariates. The results of these exploratory regression analyses were similar to those above such that with no control variables, interpersonal aggression at work was significantly related to CWB-I ($\beta = .29$, $\Delta R^2 = .09$, $p < .01$), CWB-O ($\beta = .32$, $\Delta R^2 = .10$, $p < .01$), and job search behaviors ($\beta = .21$, $\Delta R^2 = .05$, $p < .01$). In addition, with no control variables, interpersonal aggression at work emerged as significantly related to work-family conflict ($\beta = .26$, $\Delta R^2 = .07$, $p < .01$). Consistent with the results above, neither OCB-I ($\beta = .06$, $\Delta R^2 = .00$, *ns*) nor OCB-O ($\beta = -.05$, $\Delta R^2 = .00$, *ns*) was significantly related to interpersonal aggression at work.

In sum, the results of regression analyses for interpersonal aggression predicting each of the behavioral outcomes revealed that interpersonal aggression at work was significantly related to CWB-I, CWB-O, and job search behaviors. Thus, the greater the

levels of interpersonal aggression experienced by participants, the more likely they were to report that they engaged in counterproductive behaviors aimed at both other individuals and at the organization, and the more likely they were to report also engaging in actions aimed at changing jobs. Frequent experiences of interpersonal aggression at work were also associated with high levels of work-family conflict when no control variables were included in the regression equation. Experiences of interpersonal aggression had no significant relationships with either OCB-I or OCB-O. Mediation regression analyses aimed at determining whether interpersonal justice and negative affect mediate these effects are considered next.

Mediation Regressions for Psychological Processes

In Hypothesis 5 and 6, I proposed that interpersonal justice and negative affect (respectively) would mediate the relationships between interpersonal aggression and behavioral outcomes. To investigate these Hypotheses, I conducted mediation regression analyses based upon the approach described by Baron and Kenny (1986) (see also MacKinnon & Dwyer, 1993). According to this approach, there are three necessary steps to show that a variable Y mediates the relationship between variables X and Z. First, one must demonstrate that the initial variable X is significantly related to the outcome Z. Second, the initial variable X must be significantly related to the mediator Y. Third, the mediator Y must be significantly related to the outcome Z after controlling for the initial variable X. If the relationship between X and Z is zero when the mediator is included, full mediation is established, whereas if the relationship between X and Z is reduced when the mediator is included, partial mediation is established.

I examined the results presented in Table 5 to determine whether the first step was met for each of the behavioral outcomes. As reported above for Hypotheses 1 through 4, interpersonal aggression was significantly related to CWB-I, CWB-O and job search behaviors, yet it was not significantly related to OCBs or work-family conflict. According to Baron and Kenny's (1986) criteria for mediation, there were no possible effects to mediate for OCBs and work-family conflict, yet I could proceed with mediational analyses for CWBs and job search behaviors.

I explored the results for the second step of Baron and Kenny's (1986) mediational analyses by examining the relationships between interpersonal aggression (X) and the psychological processes proposed to be mediators (Y), namely interpersonal justice and negative affect at work. As shown in Table 6 below, interpersonal aggression was significantly related to both interpersonal justice ($\beta = -.37, \Delta R^2 = .09, p < .01$) and negative affect at work ($\beta = .10, \Delta R^2 = .01, p < .01$) after controlling for all covariates. Thus, the more frequently that one experiences interpersonal aggression at work, the more likely one is to report perceptions of interpersonal injustice and to have negative affect at work. The second step of mediational analyses was met for both of the psychological processes.

Table 6 - Regressions of Psychological Processes on Aggression

Predictors	Interpersonal Justice		Negative Affect at Work	
	β	Step R ²	β	Step R ²
Step 1		.25**		.45**
Dispositional Hostility	-.22**		.53**	
Org. Constraints	-.18**		.14**	
Distributive Justice	.03		.01	
Procedural Justice	.27**		-.04	
Quantitative Workload	.05		.10**	
Social Desirability	.01		.08*	
Age	.07		.02	
Gender	-.03		-.07*	
Org. Tenure	-.02		-.03	
Step 2		.09**		.01**
Aggression Total	-.37**		.10**	

Gender coded such that 1=female, 2=male.

Tabled values are standardized beta weights. Values were rounded to 2 decimals, so some rounding error is reflected above.

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

For the third and final step in Baron and Kenny's (1986) mediational analyses, it is necessary to show a relationship between the mediators and outcomes. However, an examination of the results in Table 5 revealed that neither interpersonal justice nor negative affect was significantly related to CWBs or job search behaviors. Because of this non-significant relationship between the psychological processes and the behavioral outcomes of interest, there was no possible way for these psychological processes to mediate. According to Baron and Kenny's (1986) traditional criteria for mediation, the third and final step of mediational regression analyses was non-significant and therefore, no mediation was present.

Although the traditional mediation criteria set forth by Baron and Kenny (1986) do not support the mediating role of psychological processes, some scholars have argued that the initial step (where the initial variable X is related to the outcome variable Z) is not necessary (Kenny et al., 1998). Rather, the path between the initial variable and the

outcome variable is implied if the initial variable X relates to the mediator Y, and the mediator Y relates to the outcome variable Z (p. 260). According to these modified criteria for mediation, one can test for mediation for all paths in which this condition is met. The final test of mediation then consists of examining whether the mediator Y is significantly related to the outcome Z after controlling for the initial variable X, and if so, whether β for the relationship between X and Z is reduced at this step, compared to step 2 (Kenny et al., 1998).

Based upon these modified criteria for mediation, I first examined the relationships between interpersonal aggression and OCB-I and OCB-O, as mediated by interpersonal justice (because interpersonal aggression significantly predicted interpersonal justice, and interpersonal justice significantly predicted OCB-I and OCB-O). The results of the final step for mediation can be seen in Table 7. As shown below, interpersonal justice was related to both OCB-I ($\beta = .27, \Delta R^2 = .05, p < .01$) and OCB-O ($\beta = .30, \Delta R^2 = .06, p < .01$) after controlling for interpersonal aggression. Support for mediation would have been evident had the effect of aggression on OCB-I and OCB-O decreased at step 3; however, it actually *increased* at step 3 for both types of OCBs. Thus, there is no evidence for the mediational role of interpersonal justice. Indeed, it appears that interpersonal justice is acting as a suppressor variable and that when its effects are controlled, a significant relationship between aggression and OCBs becomes evident. Hypothesis 5 was not supported.

Table 7 -- Final Step of Mediation Regressions for Interpersonal Justice

Predictors	DV: Organizational Citizenship Behaviors— Individual			DV: Organizational Citizenship Behaviors— Organizational		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Dispositional Hostility	-.05			-.06		
Org. Constraints	.11*			.04		
Distributive Justice	.02			.10		
Procedural Justice	.11			.24**		
Quantitative Workload	.08			.13**		
Social Desirability	-.09*			-.06		
Age	-.01			.10*		
Gender	-.11**			.02		
Tenure	.13**			.08		
Aggression Total		.07	.17**		.04	.15**
Interpersonal Justice			.27**			.30**
	ΔR^2	.07	.00	.05	.16	.00
	Total R^2	.07	.07	.12	.16	.16
				.22		

Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$

With regard to the mediational role of negative affect at work, it can be seen in Tables 5 and 6 that interpersonal aggression significantly predicted negative affect at work, and negative affect significantly predicted work-family conflict. I then tested the final step of mediational analysis as shown below in Table 8. Negative affect at work was significantly related to work-family conflict after controlling for interpersonal aggression ($\beta = .12$, $\Delta R^2 = .01$, $p < .05$). The β for the relationship between aggression total and work-family conflict was reduced from .06 at step two to .05 at this third step. However, this reduction in β is very small and accounts for a small portion of the variance, thus there is little support for Hypothesis 6 according to the modified criteria for mediation set forth by Kenny et al. (1998).

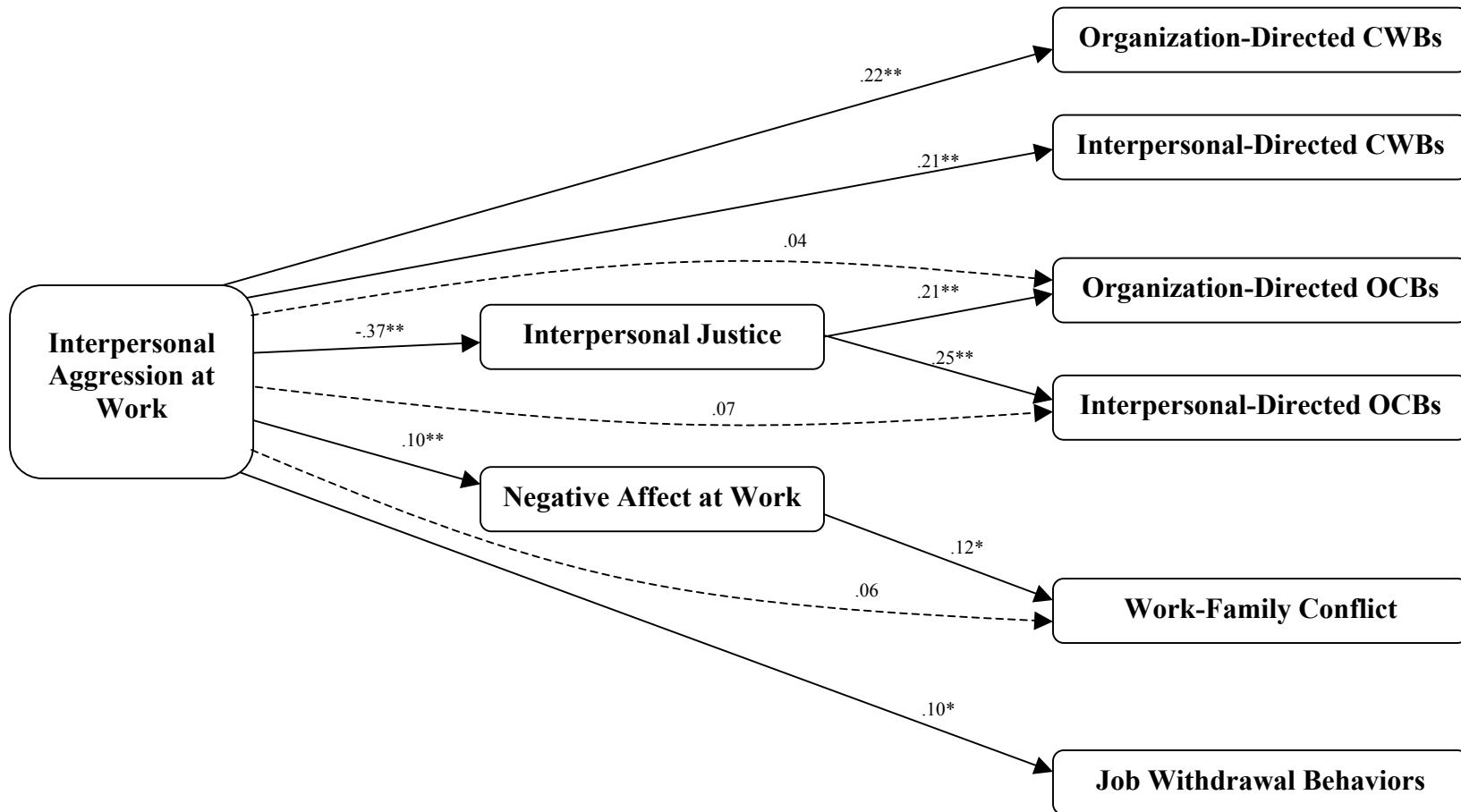
Table 8 -- Final Step of Mediation Regressions for Negative Affect

Predictors	DV: Work-Family Conflict		
	Step 1	Step 2	Step 3
Dispositional Hostility	.18**		
Org. Constraints	.07		
Distributive Justice	-.05		
Procedural Justice	-.07		
Quantitative Workload	.38**		
Social Desirability	.12**		
Age	.16**		
Gender	.08*		
Tenure	-.04		
Aggression Total		.06	.05
Negative Affect at Work			.12*
	ΔR^2	.30	.00
	Total R^2	.30	.31

Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$

In summary, the mediation results revealed that there was no support for the cognitive or emotional processes mediating the effects of interpersonal aggression on the behavioral outcomes. Interpersonal aggression at work was significantly related to CWB-I, CWB-E and JSBs, however neither interpersonal justice nor negative affect at work were significantly related to these outcomes. Thus, according to the traditional criteria for mediation (Baron & Kenny, 1986), no mediation was possible. Using more liberal criteria set forth by Kenny et al. (1998), there was also no support for mediation. Other results indicated that interpersonal justice was acting as a suppressor variable, and once its effects were controlled, a relationship between aggression and OCBs emerged. These results are discussed in more detail in the discussion section. A visual summary of the regression results for the simple main effects described above is provided in Figure 7.

Figure 7 – Visual Summary of Regression Univariate Main Effects



Values on paths are standardized beta weights.

For the relationships between psychological processes (i.e., interpersonal justice, negative affect at work) and behavioral outcomes, only those paths that were statistically significant at $p < .05$ or better are illustrated.

Moderated Regressions: Job and Target Characteristics

The continuous moderators in my model – i.e., job autonomy, job mobility, hostility, and neuroticism – were assessed through moderated regression analysis, whereas the categorical variable of supervisor versus coworker as the perpetrator of aggression was tested with moderated SEM. This is because the modeling of continuous variables as moderators in SEM (within a single sample) has been discussed as problematic (Kline & Dunn, 2000; Li et al., 1998; Moulder & Algina, 2002; Ping, 1996; Schumacker & Marcoulides, 1998) due to statistical and practical considerations. More specifically, in multiple regression, an interaction term is created by cross-multiplying raw scores of two original variables, which is then entered after the main effects of the original variables. However SEM programs cannot analyze such data because the high inter-correlations between the interaction variable and the raw scores make the covariance matrix singular (i.e., linearly dependent; Kline & Dunn, 2000). While techniques for modeling continuous moderators have been offered (e.g., Jaccard & Wan, 1995; Jöreskog & Yang, 1996; Kenny & Judd, 1984; Ping, 1996), Rigdon, Schumacker and Wothke (1998) reviewed these techniques and concluded that they have so few advantages and pose so many practical problems that it is still best for researchers to either model categorical variables or to perform a median split on the continuous moderator of interest to make it categorical. As noted by Cohen & Cohen (1983, p. 309), dichotomizing a continuous variable to test for moderation necessarily decreases the amount of variance and statistical power, as it is essentially throwing away information. In this case, my hypotheses do not necessitate that each moderated path be tested through SEM and thus, rather than throw away variance to make SEM possible, I chose to test Hypotheses 7

through 10 (the hypotheses with continuous moderators) with moderated regression analyses.

To test each of the proposed moderated relationships, I entered all of the covariates as the first step. I then entered the main effects that comprised each interaction term as a second step. The third step consisted of the interaction term of interest. Although I hypothesized moderated relationships for only some of the relationships between psychological processes and outcomes, I included all behavioral outcomes and both psychological processes in all results tables for exploratory purposes.

In Hypothesis 7, I proposed that job autonomy would moderate the relationships between negative affect and a) CWB-I, b) CWB-O, c) job search behaviors, and d) work-family conflict. Job autonomy was expected to attenuate the relationships with negative outcomes because people with high levels of job autonomy have the latitude to establish strategies to reduce negative affect (e.g., taking a break to “cool off”). The results of moderated regression analyses for job autonomy can be seen in Table 9 below. The results demonstrate that as hypothesized, there was a significant interaction effect for CWB-O ($\beta = -.44$, $\Delta R^2 = .01$, $p < .01$), yet the interaction terms did not emerge as significant for CWB-I, work-family conflict, or for job search behaviors. The nature of this interaction between job autonomy and negative affect when predicting CWB-O can be seen in Figure 8, which was plotted by doing a median split on job autonomy and negative affect.

Table 9 -- Regressions of Behavioral Outcomes on the Job Autonomy X Negative Affect Interaction

Predictors	Behavioral Outcomes											
	CWBs-I		CWBs-O		OCBs-I		OCBs-O		Work Family Conflict		Job Search Behaviors	
	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²
Step 1		.21**		.21**		.07**		.16**		.30**		.16**
Dispositional Hostility	.19**		.08		-.06		-.06		.18**		.13**	
Org. Constraints	.03		.17**		.11*		.04		.07		.16**	
Distributive Justice	.04		-.06		.02		.09		-.05		-.05	
Procedural Justice	.00		.00		.10		.24**		-.07		-.05	
Quantitative Workload	.04		-.10*		.08		.13**		.38**		-.01	
Social Desirability	.18**		.26**		-.09*		-.06		.12**		-.05	
Age	-.29**		-.22**		-.01		.10*		.17**		-.14**	
Gender	.13**		.05		-.12**		.02		.07*		-.11**	
Org. Tenure	.11*		.02		.13**		.09		-.04		-.13**	
Step 2		.00		.02**		.00		.00		.01*		.01
Job Autonomy	.06		.15**		.06		-.03		-.04		.05	
Negative Affect	.00		.04		-.02		.06		.12*		.09	
Step 3		.00		.01**		.00		.00		.00		.00
Job Autonomy X Negative Affect	-.20		-.44**		.07		.07		.05		-.12	
Step 2		.00		.02**		.04**		.05**		.00		.00
Job Autonomy	.05		.15**		.07		-.00		-.03		.05	
Interpersonal Justice	-.03		-.02		.21**		.25**		.00		-.04	
Step 3		.00		.00		.00		.01		.00		.00
Job Autonomy X Interpersonal Justice	.26		.03		.08		-.41		.13		.36	

CWBs-I = counterproductive work behaviors—individual; CWBs-O = counterproductive work behaviors—organizational; OCBs-I = organizational citizenship behaviors—individual; OCBs-O = organizational citizenship behaviors—organizational. Gender coded such that 1=female, 2=male. Values were rounded to 2 decimals, so some rounding error is reflected above. Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$.

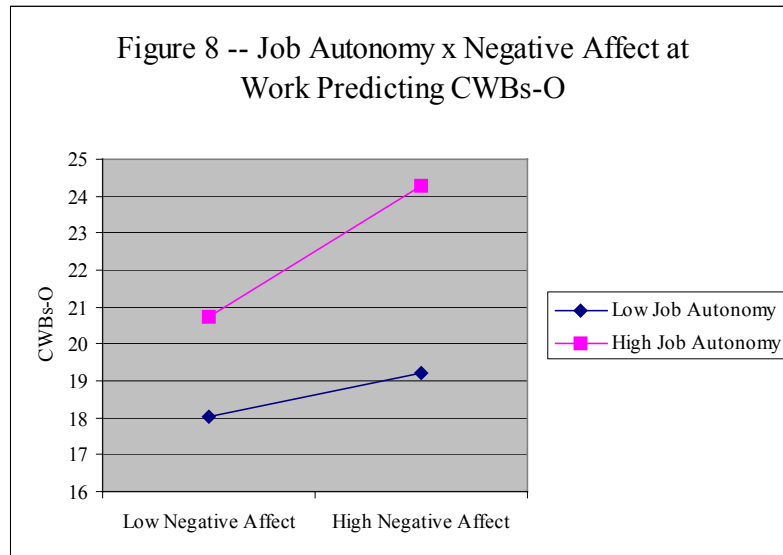


Figure 8 demonstrates that levels of job autonomy did indeed have an impact upon levels of CWB-O, especially for people with high levels of negative affect. However, contrary to Hypothesis 7, high levels of job autonomy actually seemed to allow people with high negative affect to *increase* their levels of CWB-O, rather than giving them leeway to establish strategies to “cool off” and thereby decrease CWBs. For people with low levels of negative affect, high job autonomy was also associated with greater CWB-O but to a lesser extent. Put differently, people with low levels of negative affect were impacted by autonomy such that those with high autonomy enacted more CWBs, yet the strength of this effect was much greater among those people who had high levels of negative affect. These results do not support Hypothesis 7, yet they do provide support for the moderating role of job autonomy. It appears that contrary to much of the literature on self-management and empowerment, social controls in the workplace can indeed have some positive effects such as the attenuation of CWBs when one has high levels of negative affect at work. This effect is addressed further in the discussion section.

In Hypothesis 8, I proposed that job mobility would moderate the relationships between both interpersonal justice and negative affect, and the behavioral outcomes of a) CWB-I, b) CWB-O, c) job search behaviors, and d) work-family conflict. High job mobility was expected to attenuate the relationships with negative outcomes. The results for moderated regression analyses for job mobility can be seen in Table 10.

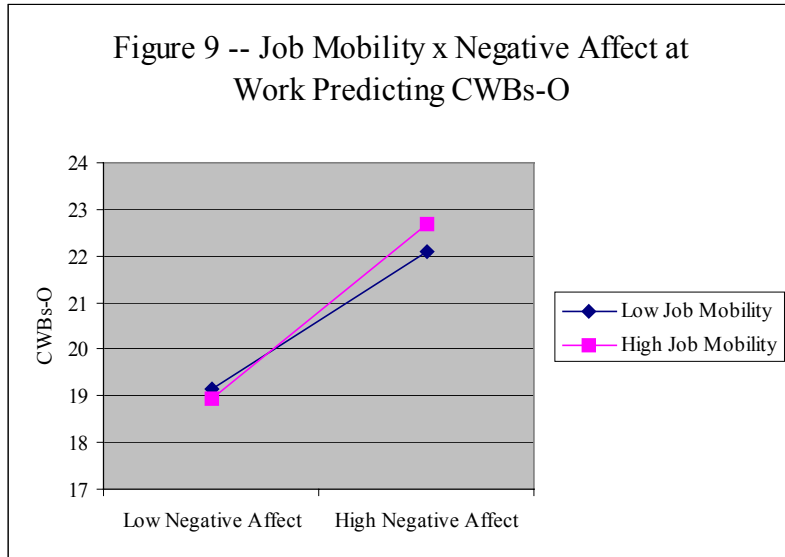
As shown in Table 10, two of the proposed interactions for job mobility were significant. The first was the interaction between job mobility and negative affect in predicting CWB-O ($\beta = .33$, $\Delta R^2 = .01$, $p < .05$). This first interaction can be seen in Figure 9 below, which was plotted by creating a median split for job mobility and negative affect.

The means plotted in Figure 9 indicate that similar to the results for job autonomy, high levels of job mobility seem to encourage higher levels of CWB-O when people have high levels of negative affect. That is, for people with low levels of negative affect at work, knowing that one can leave and find a different job did not influence CWB-O. In contrast, when one has high levels of negative affect at work, knowing that one can easily find a different job seemed to free people to perform more CWB-O. This is contrary to the Hypothesis 8, where I had proposed that people with high levels of job mobility would be *less* likely to perform CWBs because they would be able to cope better with a negative situation when they know that they can easily leave it. This effect is not as strong as that found for job autonomy, yet the two are similar in that either the absence of social controls or perceived required membership in the organization free individuals to act in a manner that is counterproductive to the organization.

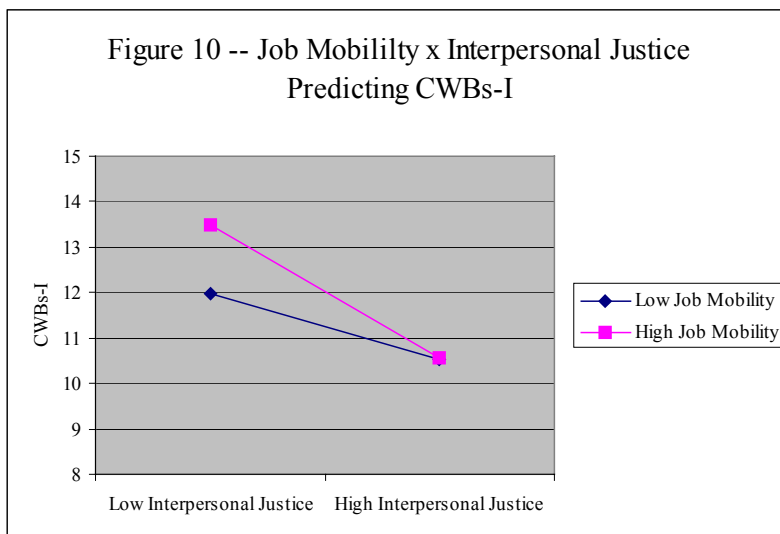
Table 10 -- Regressions of Behavioral Outcomes on the Job Mobility X Psychological Processes Interactions

Predictors	Behavioral Outcomes											
	CWBs-I		CWBs-O		OCBs-I		OCBs-O		Work Family Conflict		Job Search Behaviors	
	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²
Step 1		.20**		.21**		.07**		.16**		.29**		.16**
Dispositional Hostility	.19**		.08		-.06		-.06		.18**		.13**	
Org. Constraints	.03		.17**		.11*		.04		.07		.16**	
Distributive Justice	.04		-.06		.02		.09		-.05		-.05	
Procedural Justice	.00		.00		.11		.25**		-.07		-.05	
Quantitative Workload	.04		-.10*		.08		.12**		.38**		-.01	
Social Desirability	.18**		.26**		-.09*		-.06		.12**		-.05	
Age	-.29**		-.22**		-.01		.10*		.16**		-.14**	
Gender	.13**		.04		-.12**		.02		.07*		-.11**	
Org. Tenure	.11*		.02		.13**		.09*		-.04		-.12**	
Step 2		.01		.01		.00		.00		.01*		.01*
Job Mobility	.08*		.06		.05		.03		-.02		.09*	
Negative Affect	.01		.06		-.01		.06		.12**		.11*	
Step 3		.00		.01*		.01		.00		.00		.00
Job Mobility X Negative Affect	.20		.33*		.29		-.04		.06		.22	
Step 2		.01		.01		.03**		.04**		.00		.01*
Job Mobility	.09*		.06		.04		.02		-.02		.09*	
Interpersonal Justice	-.04		-.05		.20**		.24**		.00		-.06	
Step 3		.01*		.00		.00		.00		.00		.00
Job Mobility X Interpersonal Justice	-.47*		-.04		-.39		-.03		-.08		-.15	

CWBs-I = counterproductive work behaviors—individual; CWBs-O = counterproductive work behaviors—organizational; OCBs-I = organizational citizenship behaviors—individual; OCBs-O = organizational citizenship behaviors—organizational. Gender coded such that 1=female, 2=male. Values were rounded to 2 decimals, so some rounding error is reflected above. Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$



The second significant interaction for job mobility, job mobility x interpersonal justice predicting CWB-I ($\beta = -.47, \Delta R^2 = .01, p < .01$), was plotted in Figure 10 by creating median splits on job mobility and interpersonal justice. This effect was a replication of the effect seen above, yet it was more pronounced. Again, it appears that people with high levels of job mobility were more likely to engage in CWB-I when they also had low levels of interpersonal justice. People with high levels of interpersonal justice were likely to enact low levels of CWB-I regardless of job mobility.



Taken together, the results from these two interactions for job mobility suggest that Hypothesis 8 was not supported. Job mobility did moderate relationships with CWB-O and CWB-I, but in the opposite direction expected. As will be addressed in more detail in the discussion section below, these results (combined with those of job autonomy) suggest that large amounts of employee freedom (i.e., perceived lack of attachment to an organization and/or freedom to structure one's work as one pleases) may actually be detrimental for organizations, at least with regard to levels of CWBs.

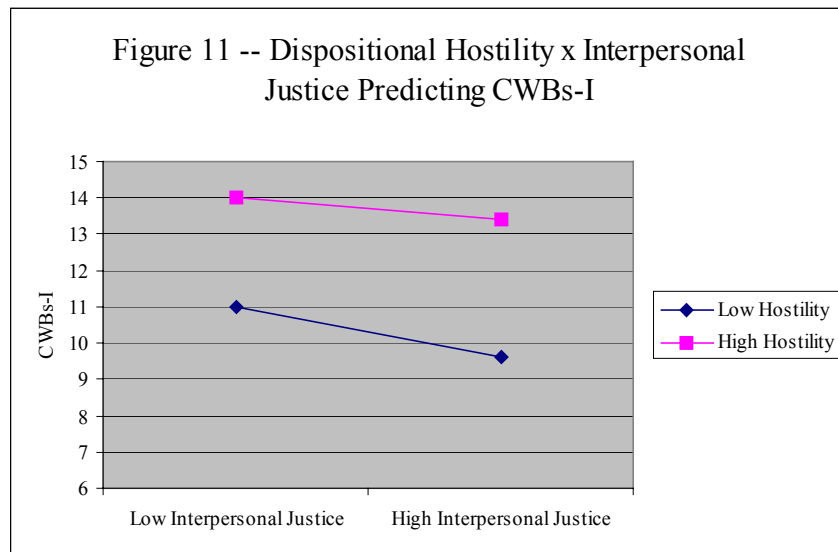
In Hypothesis 9, I proposed that dispositional hostility would moderate the relationships between both interpersonal justice and negative affect, and the behavioral outcomes of a) CWB-I, b) CWB-O, c) job search behaviors, d) work-family conflict, e) OCB-I, and f) OCB-O. I expected that people with high levels of hostility would react much more strongly to experienced injustice or negative affect, and that people with low levels of hostility would have less extreme reactions. The results of moderated regression analyses for hostility can be seen in Table 11. These results reveal that three interactions emerged as significant for dispositional hostility. First, hostility interacted with interpersonal justice to predict CWB-I ($\beta = .39$, $\Delta R^2 = .01$, $p < .05$). Second, hostility also interacted with interpersonal justice to predict WFC ($\beta = .40$, $\Delta R^2 = .01$, $p < .01$). Third, hostility interacted with negative affect to predict OCB-O ($\beta = .55$, $\Delta R^2 = .02$, $p < .01$). Each of these interactions is considered in turn.

Table 11 -- Regressions of Behavioral Outcomes on Dispositional Hostility X Psychological Processes Interactions

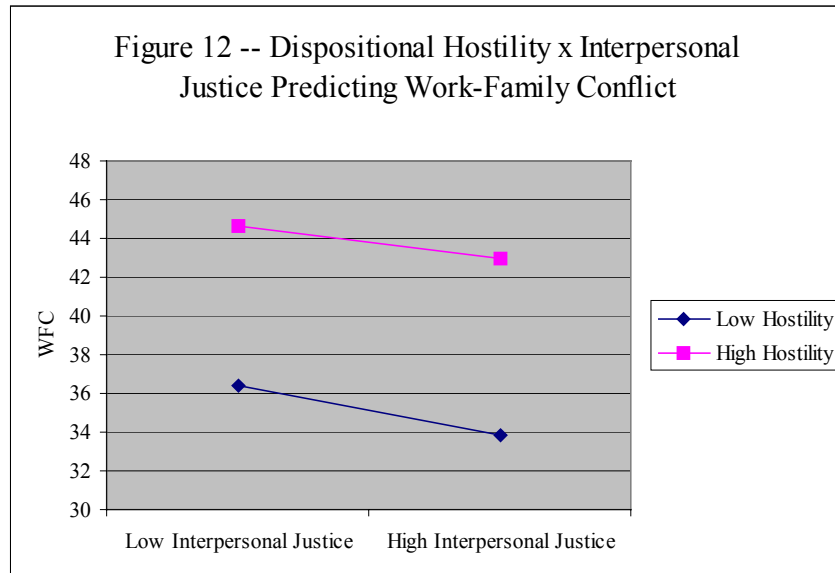
Predictors	Behavioral Outcomes											
	CWBs-I		CWBs-O		OCBs-I		OCBs-O		Work Family Conflict		Job Search Behaviors	
	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²
Step 1		.18**		.21**		.06**		.16**		.27**		.15**
Org. Constraints	.09		.20**		.09		.02		.13**		.20**	
Distributive Justice	.05		-.06		.02		.09		-.04		-.05	
Procedural Justice	-.01		-.00		.11		.25**		-.09		-.06	
Quantitative Workload	.06		-.09*		.08		.12**		.40**		.01	
Social Desirability	.22**		.28**		-.10*		-.08		.16**		-.02	
Age	-.32**		-.23**		-.00		.11*		.14**		-.16**	
Gender	.13**		.05		-.11**		.02		.07*		-.11**	
Org. Tenure	.11*		.02		.13**		.09		-.04		-.12**	
Step 2		.03**		.01		.00		.00		.03**		.02**
Hostility	.19**		.05		-.05		-.08		.11*		.08	
Negative Affect	.01		.05		-.02		.05		.12*		.10	
Step 3		.00		.00		.00		.02**		.00		.00
Hostility X Negative Affect	-.15		.10		.12		.55**		-.19		.06	
Step 2		.03**		.01		.03**		.05**		.02**		.01*
Hostility	.19**		.07		-.01		.00		.18**		.12*	
Interpersonal Justice	-.03		-.04		.21**		.25**		.00		-.05	
Step 3		.01*		.00		.00		.00		.01**		.00
Hostility X Interpersonal Justice	.39*		.09		-.25		-.20		.40**		-.10	

CWBs-I = counterproductive work behaviors—individual; CWBs-O = counterproductive work behaviors—organizational; OCBs-I = organizational citizenship behaviors—individual; OCBs-O = organizational citizenship behaviors—organizational. Gender coded such that 1=female, 2=male. Values were rounded to 2 decimals, so some rounding error is reflected above. Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$

As shown in Figure 11 below (which was plotted based upon median splits for hostility and interpersonal justice), people high on hostility seemed to perform high CWB-I regardless of levels of interpersonal justice. It was actually people who were low on hostility whose levels of CWB-I were more impacted by perceptions of justice. Thus, contrary to expectations, hostile people were not more likely to react severely when faced with interpersonal injustices.



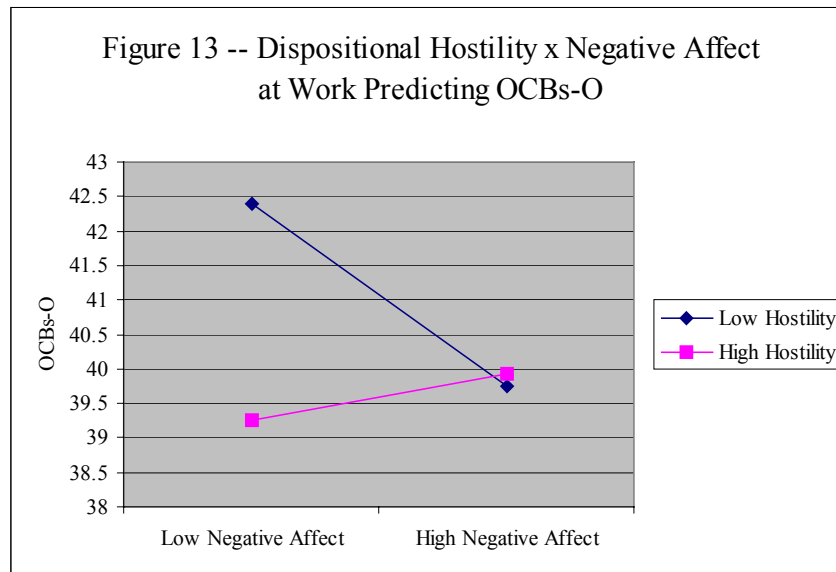
The second interaction for hostility – i.e., hostility x interpersonal justice predicting work-family conflict – was plotted based upon median splits in Figure 12. Parallel to the results presented above, Figure 12 reveals that for people high on hostility, interpersonal justice perceptions are not very important in determining WFC levels, as they tend to report high levels of WFC regardless. In contrast, for people who are low on hostility, perceptions of interpersonal justice were more influential in determining levels of work-family conflict. These results demonstrate that hostility did moderate, yet in a direction that was opposite to my initial expectations.



The final significant interaction for dispositional hostility – i.e., hostility x negative affect at work predicting OCB-O – was plotted in Figure 13 by creating median splits for hostility and negative affect. As can be seen in Figure 13, people high in hostility were likely to report low levels of OCB-O overall. In contrast, for people low in hostility, levels of negative affect at work were very influential in determining levels of OCB-O. People with high levels of negative affect at work tended to perform low levels of OCB-O regardless of their levels of trait hostility. People with low levels of trait hostility and low levels of negative affect at work were most likely to perform OCB-O.

These three significant interactions for dispositional hostility provided evidence for the moderating role of dispositional hostility. Having high levels of hostility has negative implications for CWB-I, work-family conflict, and OCB-O, yet contrary to my hypothesis, hostile people were not more likely to react severely when faced with injustices and/or negative affect. Rather, it seemed that hostile people enacted these negative behavioral outcomes regardless, and it was actually the people *low* on hostility

whose behaviors were more impacted by their levels of perceived justice or negative affect.



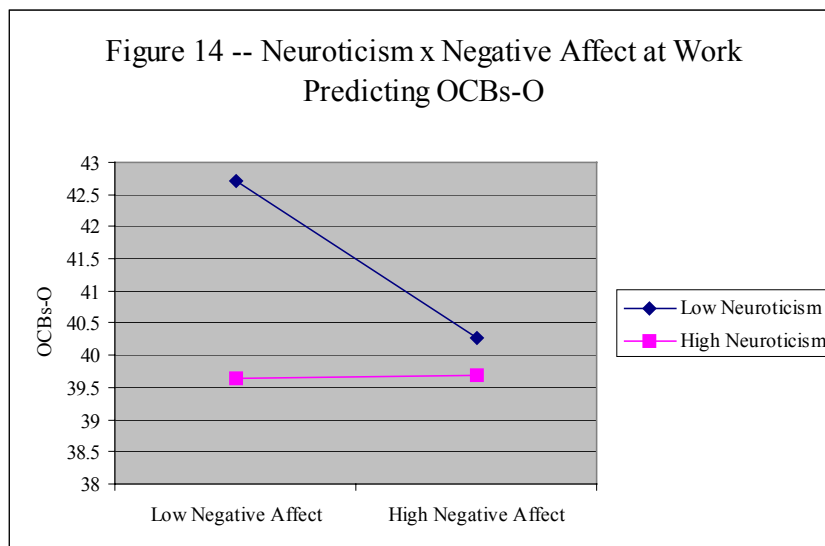
Hypothesis 10 proposed that neuroticism would moderate the relationships between both interpersonal justice and negative affect, and the behavioral outcomes of a) CWB-I, b) CWB-O, c) job search behaviors, d) work-family conflict, e) OCB-I, and f) OCB-O. I expected that people high on neuroticism would be more likely to have extreme behavioral reactions when faced with injustices or negative affect, whereas emotionally stable people would be less impacted because they often find positive ways of coping. The results of moderated regression analyses for neuroticism are presented in Table 12. The results indicate that there were two significant interactions found for neuroticism, and both of them were for the outcome of OCB-O. Neuroticism interacted with both negative affect ($\beta = .47, \Delta R^2 = .01, p < .05$) and interpersonal justice ($\beta = -.51, \Delta R^2 = .01, p < .05$) to predict OCB-O.

Table 12 -- Regressions of Behavioral Outcomes on Neuroticism X Psychological Processes Interactions

Predictors	Behavioral Outcomes											
	CWBs-I		CWBs-O		OCBs-I		OCBs-O		Work Family Conflict		Job Search Behaviors	
	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²	β	Step R ²
Step 1		.21**		.21**		.07**		.16**		.30**		.16**
Dispositional Hostility	.19**		.08		-.06		-.06		.18**		.13**	
Org. Constraints	.03		.17**		.11*		.04		.07		.16**	
Distributive Justice	.04		-.06		.02		.09		-.05		-.05	
Procedural Justice	.00		.00		.10		.24**		-.07		-.05	
Quantitative Workload	.04		-.10*		.08		.13**		.38**		-.01	
Social Desirability	.18**		.26**		-.09*		-.06		.12**		-.05	
Age	-.29**		-.22**		-.12**		.10*		.17**		-.14**	
Gender	.13**		.05		.13**		.02		.07*		-.11**	
Org. Tenure	.11*		.02				.09		-.04		-.13**	
Step 2		.00		.01		.00		.01		.02**		.01
Neuroticism	-.04		-.07		-.02		-.12*		.14**		-.03	
Negative Affect	.01		.06		-.02		.07		.11*		.10	
Step 3		.00		.00		.00		.01*		.00		.00
Neuroticism X Negative Affect	-.01		-.04		-.20		.47*		-.07		-.26	
Step 2		.00		.00		.03**		.05**		.01**		.00
Neuroticism	-.04		-.07		-.01		-.09		.15**		-.02	
Interpersonal Justice	-.03		-.04		.21**		.24**		.01		-.05	
Step 3		.01		.00		.00		.01*		.00		.00
Neuroticism X Interpersonal Justice	.39		.15		-.32		-.51*		.20		.21	

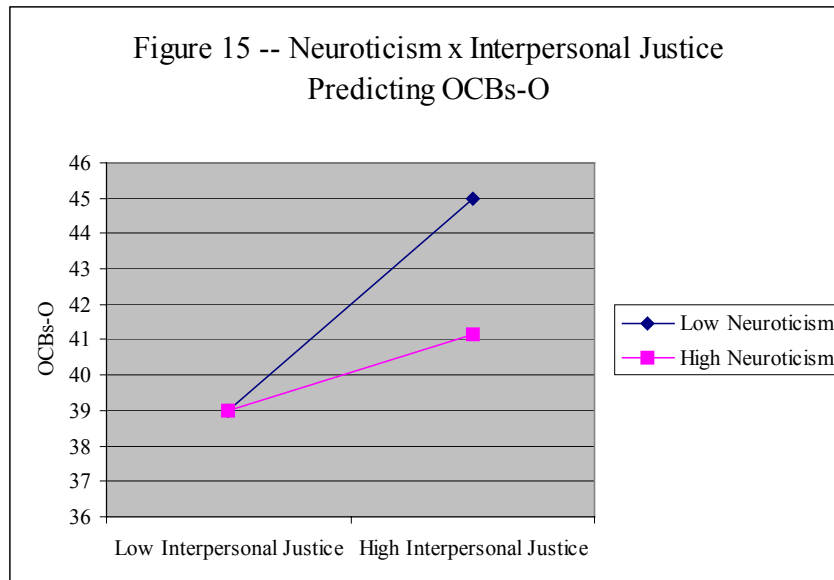
CWBs-I = counterproductive work behaviors—individual; CWBs-O = counterproductive work behaviors—organizational; OCBs-I = organizational citizenship behaviors—individual; OCBs-O = organizational citizenship behaviors—organizational. Gender coded such that 1=female, 2=male. Values were rounded to 2 decimals, so some rounding error is reflected above. Tabled values are standardized beta weights. * = $p < .05$, ** = $p < .01$

The interaction between neuroticism and negative affect was plotted in Figure 14 (based upon median splits for neuroticism and negative affect). Figure 14 revealed that people high in neuroticism were less likely to engage in OCB-O regardless of negative affect levels and that people with high levels of negative affect at work also had low levels of OCB-O overall. The people who were most likely to perform OCB-O were those who were both low in neuroticism and also low in negative affect. These results are contrary to Hypothesis 10 because neurotic people were actually quite consistent in their behaviors regardless of their levels of negative affect. Instead, it was the emotionally stable people whose OCB-O seemed to be more greatly influenced by levels of negative affect.



The interaction between neuroticism and interpersonal justice in predicting OCB-O also revealed a similar pattern. This interaction was plotted in Figure 15 based upon median splits for neuroticism and interpersonal justice. People with high levels of neuroticism tended to perform low OCB-O, and they were not much influenced by levels of interpersonal justice. In contrast, those people with low levels of neuroticism tended

to perform low levels of OCB-O only when paired with low levels of interpersonal justice; with high levels of interpersonal justice, their OCB-O levels were high.



Taken together, these interaction results for neuroticism provided evidence for the moderating role of neuroticism, which is consistent with some results for hostility presented above. The similarity in OCB moderation results for hostility and neuroticism will be discussed in greater detail in the discussion section

In sum, the results of moderated regression hypotheses for the job characteristics (i.e., job autonomy, job mobility) and target characteristics (i.e., dispositional hostility, neuroticism) were not in line with my initial predictions; nonetheless, there were moderation effects apparent in the data that were consistent across job characteristics (i.e., job autonomy, job mobility) and/or target characteristics (i.e., hostility, neuroticism). Both job characteristics moderate relationships for either CWB-I and/or CWB-O, but not for other behavioral outcomes. The target characteristics influenced a

broader range of behavioral outcomes including WFC and OCBs in addition to CWB-I, and these target characteristics have similar relationships with OCB-O.

Moderated Mediation

The moderation results for Hypotheses 7 through 10 presented above provided evidence for some moderated relationships between psychological processes and behavioral outcomes. However, one disadvantage of these results is that they do not demonstrate a linkage back to the initial key variable in my model, namely interpersonal aggression at work. One possible analytical technique that can be used to test the full path from aggression to outcomes, *as mediated by an interaction*, is called moderated mediation. Moderated mediation is similar to traditional mediational analysis in that one needs to demonstrate 1) a relationship between an initial variable X and an outcome variable Z, 2) a relationship between the initial variable X and the mediator Y, and then 3) that the mediator Y is related to Z after controlling for X, and that the relationship between X and Z is reduced at this step. However, rather than utilizing a single construct as the mediator (Y), one examines the interaction of interest as the mediator, after controlling for the main effects of the variables that comprise the interaction (Kenny, 2004; e.g., Michie et al., 2002).

As an example, in the current study, I found that autonomy x negative affect at work predicted CWB-O. There was no mediated relationship between interpersonal aggression at work and CWB-O through negative affect, yet it is possible that the interaction of autonomy x negative affect at work might mediate instead. This mediation might indicate, for instance, that interpersonal aggression is related to CWB-O through negative affect, but only when levels of job autonomy are high. To show this moderated

mediation effect, I would need to follow the steps of mediational analyses described above, where X is interpersonal aggression, the mediator Y is ‘autonomy x negative affect at work’ and the outcome Z is CWB-O.

An examination of the results presented above reveals that I have already reported the relationships between the initial variable of interpersonal aggression and the behavioral outcomes (see Table 5), thus the next step of moderated mediation is to demonstrate a relationship between interpersonal aggression and the interaction terms of interest. I conducted hierarchical linear regressions that tested the relationships between interpersonal aggression and each of the significant interaction terms reported above, after controlling for the covariates in the first step and the main effects in the second step. The results revealed that none of the relationships between interpersonal aggression and these interaction terms were statistically significant. For each of these relationships, interpersonal aggression accounted for 0% of the variance in the interaction term. In the interest of space, I have chosen to not present the eight regression tables for these non-significant findings.

In summary, moderated mediation analyses offered the potential for linking interpersonal aggression with behavioral outcomes through the interactions reported in the results for Hypotheses 7-10. However, the non-significant relationships between interpersonal aggression and the interaction terms meant that such mediation was not possible for my model. I next proceeded to test the moderating role of perpetrator status (Hypothesis 11) through moderated SEM.

Moderated SEM: Perpetrator Status

Hypothesis 11 proposed that who the perpetrator of the aggression was would influence the results such that relationships with CWB-O and OCB-O would be more evident when the supervisor was the perpetrator, and relationships with CWB-I and OCB-I would be more evident when a coworker was the perpetrator. As noted above, this hypothesis was most readily tested through moderated (multigroup) SEM due to the categorical nature of the moderator. The procedures required to test this hypothesis were as follows. I first randomly selected 50% of my data and split my sample, such that I examined supervisor aggression for one half of the sample and coworker aggression for the other half. Then, I created covariance matrices for each sample, with the nine covariates partialled out. The covariance matrices for the two 50% random samples were inputted together into the same model and a multi-group analysis procedure was requested in Mplus. The first model tested was based upon the significant regression results (summarized in Figure 7 above), and was an unconstrained model where both groups' parameters were estimated simultaneously but with no equality constraints imposed. Then, to determine if there was moderation, I imposed an equality constraint on the two models such that the regression coefficients were forced to be equal. If there was evidence of moderation, the constrained model would fit significantly worse than the unconstrained model. If moderation evidence was present, one could then proceed to free constraints on particular paths (e.g., CWB-I and CWB-O) to determine whether those particular paths are causing the drop in model fit between the unconstrained and constrained models (e.g., Druely & Townsend, 1998; Smith, Hanges & Dickson, 2001).

Table 13 – Fit Statistics for Moderated SEM Models

Model	Chi-Square (df)	Chi-Square / df Ratio	SRMR	RMSEA	CFI
Unconstrained multi-group (supervisor vs. coworker) model	45.167 (26)	1.74	.042	.053	.944
Multi-group (supervisor vs. coworker) model with regression coefficients constrained	49.696 (34)	1.46	.044	.042	.954

The results for my moderated SEM analyses for perpetrator status can be seen in Table 13. The fit statistics for the two models (unconstrained and constrained) were both good, as they exceed the minimum criteria for the fit statistics' acceptable fit. However, the constrained model did not evidence the substantial drop in model fit that would have occurred if moderation was evident. To more formally test whether the constrained model was significantly worse than the initial model, I conducted a chi-square difference test. The difference between the two models' chi-square values was 4.529, with 8 degrees of freedom. The critical value for $p < .05$ with 8 df was 15.51. Because the chi-square difference value does not exceed this critical value, the models were non-significantly different in terms of their fit. Thus, there was no evidence suggesting that the perpetrator's status moderated the observed relationships. Interpersonal aggression targets' psychological reactions and behavioral outcomes did not differ based upon whether a supervisor or coworker was the perpetrator of the aggression. Hypothesis 11 was not supported.

CHAPTER 5 – DISCUSSION

Overview

The purpose of this dissertation was to extend the workplace aggression literature by proposing and testing a more comprehensive model of behavioral outcomes associated with interpersonal aggression – i.e., counterproductive work behaviors (CWBs), organizational citizenship behaviors (OCBs), job search behaviors, and work-family conflict. Furthermore, I examined two cognitive and emotional mediators of the relationship between experiencing interpersonal aggression and behavioral outcomes (i.e., interpersonal justice and negative affect at work), as well as several moderators including job characteristics (i.e., job autonomy, job mobility), target characteristics (i.e., dispositional hostility, neuroticism), and perpetrator characteristics (i.e., perpetrator status). The hypotheses were tested through established survey measures administered to a representative sample of 728 working adults who were diverse with regard to their jobs, occupations, and industries among other factors.

The results revealed that frequency of interpersonal aggression experiences were significantly related to enacting high levels of CWBs aimed at both the organization and at other individuals, and also related to high levels of job search behaviors. There was also some evidence of a relationship between interpersonal aggression at work and work-family conflict, yet this relationship was only evident when the no control variables were included in the regression equation. Interpersonal aggression experiences were also associated with perceptions of interpersonal injustice and negative affect at work. The proposed mediated relationship between interpersonal aggression and OCBs through

interpersonal justice was not supported, yet a positive relationship between interpersonal aggression and OCBs emerged once the effects of interpersonal justice were controlled.

The moderation results revealed evidence for the moderating role of job characteristics and target characteristics. Job autonomy and job mobility were both associated with increases in the levels of CWBs (compared to low levels of autonomy and mobility), particularly among those people who perceived their interpersonal treatment as unfair or who experienced negative affect at work. Dispositional hostility and neuroticism had effects on OCBs, such that those with low dispositional hostility (or neuroticism) only enacted low levels of OCBs when they also had high levels of negative affect at work, yet people high on hostility (or neuroticism) enacted low levels of OCBs regardless. Hostile people were also more likely to report CWBs and work-family conflict regardless of interpersonal justice perceptions, yet for people low on hostility, interpersonal justice perceptions played a larger role in determining CWB and WFC levels. With regard to perpetrator characteristics, the results of moderated SEM suggest that there was no evidence for differential relationships in the model based upon whether the perpetrator of the aggression was one's supervisor or coworker.

These results help to advance the workplace aggression literature by moving beyond the typical set of psychological, physiological, attitudinal outcomes that have frequently been examined, and demonstrating that experiences of interpersonal aggression (a workplace stressor) were related to *behavioral* strain as well. The inclusion of psychological mediators and three sets of moderators (job, target and perpetrator characteristics) also extends the current literature, especially since a great deal of work has been devoted to assessing incidence rates, a handful of outcomes, or at best, a

mediator (e.g., Tepper, 2000; Zellars, Tepper, & Duffy, 2002). Specific findings and their implications for research, theory and future directions are considered below. The limitations of this study are presented following the discussion of the findings, followed by the practical implications for organizations and a conclusion.

Direct Effects of Interpersonal Aggression on Behavioral Outcomes

The significant relationship between aggression and counterproductive work behaviors is consistent with decades of theory and lab research in the social psychological tradition, which have found that the best predictor of enacting aggressive acts is to have been a target of aggressive acts (Bandura, 1973; Buss, 1961; Donnerstein & Hatfield, 1982; Gouldner, 1960; Helm, Bonoma & Tedeschi, 1972; Pruitt & Rubin 1986). Given the abundance of support for the aggression—counter-aggression hypothesis in the lab, it is surprising that there has been little organizational research on the relationship between experiencing aggression as a stressor at work (as opposed to examining a single episode of aggression) and also enacting counterproductive or aggressive acts at work. Indeed, one of the few organizational papers that has presented empirical support for this relationship is by Duffy et al. (2002), who demonstrated that experiencing social undermining (i.e., only mild forms of interpersonal aggression) was related to enacting CWB-I and CWB-O. The results of this study corroborate these findings and extend them with the inclusion of a broader range of aggressive acts, as well as the examination of mediators and moderators.

One key question that arises when examining this aggression—counter-aggression finding regards the issue of causality. This is a difficult issue because, as noted by Andersson and Pearson (1999) in their paper in incivility spirals, there is often a cyclical

relationship between being a target and being an aggressor once a conflict has begun, and thus it is difficult to determine what sparked the conflict and whether one is a “target” or a “perpetrator” at any given point in time. However, this argument is in contrast to those made by scholars writing about bullying, who contend that persistent interpersonal aggression is typically unidirectional, such that there is a perpetrator who causes the aggression and a target who reacts to it (Leymann, 1996; Einarsen et al., 1994; Hoel, Cooper & Faragher, 2001; Zapf et al., 1996). In the case of bullying, there would be a clear causal arrow between experiencing interpersonal aggression and experiencing negative outcomes. One of the limitations of the cross-sectional survey methodology that I employed was that I was unable to examine this issue empirically. Future longitudinal research that examines employees’ aggressive experiences and their associated attitudes and behaviors over time (perhaps with a diary methodology) would help to address some of these questions about the causal relationships involved.

The results also revealed that there was a direct relationship between experiences of interpersonal aggression at work and job search behaviors. Existing research on outcomes associated with aggression has consistently revealed relationship with intentions to leave the organization (Ashforth, 1997; Cortina et al., 2001; Keashly et al., 1994, 1997; Leymann, 1996; Rayner & Hoel, 1997; Tepper, 2000), however, as poignantly noted by Kopelman et al. (1992) in their article title, “intentions (and new year’s resolutions) often come to naught” (p. 269). In other words, employees may want to leave their current organization and intend to do so, yet if they never translate these intentions into actual behaviors such as updating their resume and contacting prospective employers, these intentions are unlikely to lead to actual turnover. Thus, the relationship

between aggression and job search behaviors discovered in this research reveals that these targets of aggression moved beyond thinking about leaving their jobs, and were instead acting on their intentions. Another aspect of this finding is that this relationship was direct and unmoderated. This finding suggests that experiencing interpersonal aggression is aversive and is associated with behaviors to leave the job, regardless of who perpetrated the aggression (supervisor or coworkers), whether one has job autonomy, whether one is hostile, and so forth. This finding fits with the qualitative evidence from the bullying literature which has shown that for many targets who experience aggression on a regular basis, the behaviors only ceased when the targets quit (Davenport et al., 2002; Namie & Namie, 2000), and thus job search behaviors would be essential to stop the aggression.

Interpersonal Aggression, Psychological Processes & Mediation

This study demonstrated that employees' interpersonal aggression experiences were significantly related to their *general* perceptions of interpersonal fairness at work. Earlier work by Tepper (2000) provided some evidence for a relationship between supervisory abuse and perceptions of interactional justice (both interpersonal and informational) during the enactment of formal procedures. The current research extended this work by demonstrating that when people experience interpersonal aggression, regardless of the whether the source is a supervisor or a coworker, they are likely to perceive that they are unfairly treated in general at work. The results also demonstrated that interpersonal justice perceptions were significantly related to both OCB-I and OCB-II. This is yet further evidence that when people have positive attitudes and experiences at work, they are likely to "give back" to the organization and its members (c.f., Organ & Ryan, 1995).

The fact that interpersonal justice was only significantly related to the behavioral outcome of OCBs was surprising, especially given the previous evidence that interactional justice predicts CWBs and job search behaviors in addition to OCBs (e.g., Aquino et al., 1999; Aquino et al., 2001; Greenberg & Alge, 1998; Skarlicki & Folger, 1997; Skarlicki et al., 1999). While the exact reasons behind this are not entirely clear, I offer three possible reasons. First, consistent with the current state of the literature on organizational justice (Colquitt, 2001; Colquitt et al., 2001; Colquitt & Greenberg, 2003), I measured interpersonal justice as a construct that is distinct from informational justice, yet earlier research combined the two into a single index of interactional justice. Given that the sensemaking process surrounding interpersonal aggression is about how one was interpersonally treated and not about whether adequate information was provided, I argue that the specific focus upon interpersonal justice is warranted and should be used in future research on aggression. Second, the relationships observed in previous research may have been inflated due to a failure to control for numerous other ‘third variables’ that may inflate the relationship between perceived injustice and CWBs and/or job search behaviors. For instance, the zero-order correlations between interpersonal justice and CWB-I, CWB-O and job search behaviors were all statistically significant in my study, yet they reduced to non-significance after including several covariates in the first step of regression analyses. By controlling for numerous personal and situational factors, one has more confidence that the effects are due to interpersonal justice alone. Finally, as noted above, the focus in this research was upon perceptions of interpersonal treatment at work in general, not only treatment by official representatives of the organization during formal procedures. I believe it is overly narrow for scholars to focus solely on formal

procedures, particularly for interpersonal justice. Formal procedures (e.g., performance reviews, promotion decisions) are rare, yet most employees interact with their colleagues and supervisors on a daily basis, and thus likely form perceptions of the fairness of their treatment on a daily basis. Although such a focus is a departure from the literature and may explain some of my divergent results, I contend that future research needs to continue to investigate interpersonal justice as a broader construct.

Mediational analyses demonstrated that interpersonal justice did not mediate the relationship between interpersonal aggression and OCBs, yet these results revealed that aggression was related to OCB once the effects of interpersonal justice were controlled. Interpersonal justice was acting as a suppressor of the relationship between aggression and OCBs. This was due to the fact that both aggression and interpersonal justice were positively correlated with OCBs (albeit non-significant for aggression), yet had a negative relationship with each other. Once interpersonal justice was controlled, it became evident that people who reported experiencing high levels of aggression actually reported doing *higher* levels of OCBs than people with low levels of aggression. Such a finding was counterintuitive and inconsistent with my hypotheses, yet an examination of research on the personalities of aggression (or bullying) targets might help to reconcile this finding. In particular, Coyne, Seigne and Randall (2000) found that they could predict workplace victim status based upon big five personality traits. The traits that were shared by most targets of bullying included being significantly more conscientious, agreeable, neurotic, and less extroverted. If targets of persistent aggression are indeed more conscientious and agreeable, this finding could help to explain why people who experience high levels of aggression are also those who enact OCBs since

conscientiousness is the most reliable person predictor of OCBs (Organ & Ryan, 1995). If this is the case, the implications for organizations would be very important because they would suggest that the very employees who are detail-oriented, reliable and who go beyond the call of duty for the organization are the same people who are at risk for becoming targets of aggression. Future aggression research should continue to investigate this relationship between experiencing aggression and OCBs, and should include a range of personality factors including conscientiousness.

This study also demonstrated that employees who frequently experience aggression also tend to report high levels of negative affect at work. Previous research has demonstrated that anger is typically experienced by employees during aggressive episodes (Glomb, 2002; Fitness, 2000), yet this study takes this one step further by showing that the levels of aggression experienced in general at work were associated with negative affect at work, not just anger experienced during a single episode. Although aggression was related to negative affect at work, negative affect had very limited relationships with the behavioral outcomes, such that it was only significantly related to work-family conflict. The mediational analyses did not provide evidence for a mediated relationship between aggression and work-family conflict through negative affect, yet further work is needed. In particular, scholars may benefit from analyzing the relationships between interpersonal aggression and *specific* forms of negative affect at work, such as anger, fear, or shame. It is possible that the non-significant relationships between negative affect and most of the behavioral outcomes were due in part to my focus upon generalized negative affect, which may have less predictive power than a specific emotion such as anger. An examination of specific emotions associated with

aggression may evidence differential relationships with outcomes; for instance, anger at work may be most closely linked with CWBs, yet fear or anxiety at work may be linked with job search behaviors or other attempts to withdrawal from the environment. The re-introduction of emotions into the organizational sciences is relatively recent (Lord, Klimoski & Kanfer, 2002), and thus this is but an initial foray into an area that is ripe for theoretical and empirical contributions.

More generally, the lack of support for the mediational role of either psychological process for the behavioral outcomes was surprising, especially given that interpersonal aggression was significantly related to both interpersonal justice and negative affect at work, and that these psychological processes predicted two of the outcomes (OCBs and work-family conflict). This raises the question of why the mediational relationships were not supported. I still contend that there is not a “knee jerk” behavioral reaction when one experiences aggression, but instead, psychological processes should mediate the relationships. However, it is possible that the processes that would link aggression experiences to negative behavioral outcomes were not included in this study. One relevant set of variables deals with the psychological appraisal of the aggression experiences, and includes such variables as perceived intent to harm, the extent to which one believes that the aggressive acts actually harmed them, and blame. Theory on episodes of aggression suggests that targets engage in appraisal processes in which they evaluate what happened, why it happened, how badly it hurt them, and what they can do about it (Folger & Skarlicki, 1998; Martinko, Gundlach & Douglas, 2002; Martinko & Zellars, 1998; Neuman & Baron, 1996). These appraisal processes are then associated with cognitive and affective psychological reactions such as interpersonal justice

perceptions and negative affect (Folger & Skarlicki, 1998; Martinko et al., 2002; Spector & Fox, 2002). It is possible that these initial appraisal variables may be the more relevant psychological variables for mediating interpersonal aggression's effects. It will be important for scholars to devise measures of psychological appraisal for use when studying interpersonal aggression at work as an organizational stressor, and to examine their mediational potential.

Another possible reason for the absence of mediated relationships between interpersonal aggression and outcomes deals with the timeframe that participants were referring to when responding to the measures of aggression, affect, justice and the outcomes. In this research, I utilized existing research scales that had evidence for good reliability and validity, and I did not impose timeframes (e.g., "think about your experiences in the last 6 months") on these existing measures. However, it is possible that the absence of a timeframe actually led participants to consider different times that may have even differed scale by scale. If, for example, participants were thinking about their past two years of employment when responding to the interpersonal aggression scale, yet they were only thinking about their previous two weeks of employment when answering questions about negative affect at work, this could explain help to explain the lack of mediation. Although I do not believe that the absence of a timeframe greatly biased my results given that the relationships between aggression and the psychological mediators were as expected, it will be important for future research to examine whether imposing specific timeframes on the measures influences the results and helps to discover mediational relationships.

One additional consideration is that the cross-sectional methodology employed may make it difficult to reveal mediated relationships between experiences of aggression and outcomes. More specifically, if employees who experience interpersonal aggression at work enact negative behavioral outcomes in an effort to restore interpersonal justice, it is possible that data collection at a single point in time makes it difficult to reveal mediated relationships because balance has already been restored. For example, if an employee is inappropriately yelled at by her boss, she perceives that this is unfair interpersonal treatment, and she then slows down her production rates to make her boss look bad, she has restored justice (c.f., Andersson & Pearson, 1999). It is possible that interpersonal justice was not shown to be consistently associated with CWBs as hypothesized because of this balancing process. Future longitudinal work on this topic is needed to be able to fully address this issue.

Job Characteristics as Moderators

Moderation results from this study revealed that significant interactive effects emerged for job characteristics. These findings were inconsistent with my research hypotheses regarding the direction of the moderated relationships, yet they provide evidence of the importance of these variables in explaining the conditions when various behavioral outcomes were more or less likely (in conjunction with the psychological processes). Results for job autonomy and job mobility, along with implications and future directions are discussed below.

The results for job autonomy revealed that autonomy was associated with increases in the levels of CWBs (compared to low levels of autonomy), particularly among those people who experienced high levels of negative affect at work. Similar results emerged

for job mobility, such that people with high job mobility were more likely to enact CWB-O when paired with high levels of negative affect at work, and CWB-I when paired with low levels of interpersonal justice. People with low levels of negative affect and/or high interpersonal justice were less affected by levels of job mobility. More broadly, these results revealed a consistent pattern indicating that people who are disgruntled (perceive injustice, have negative affect) in their work environment are more likely to seize opportunities to “act out” and enact damaging behaviors when they arise. For autonomy, the results revealed that even employees who are not disgruntled may seize opportunities to enact CWB-O, but to a lesser extent than those with high negative affect. While much organizational research has touted the importance of enhancing employees’ autonomy, this research reveals that there is a “dark side” to job autonomy. By giving employees the freedom to structure their work as they please, employers are also freeing their employees from social controls that can have beneficial outcomes such as encouraging accountability and rule compliance (c.f., Katz & Kahn, 1966; Tetlock, 1992). Similarly, when people believe that they are very marketable and thus may not be highly committed to staying with a particular organization (c.f., Meyer & Allen, 1997), this also seems to have much the same effect as autonomy. It provides employees with a certain level of perceived freedom to do as they wish, which translates into higher levels of CWB-O and CWB-I in this case. In both of these cases, the employees’ freedom has negative ramifications for organizations, thus organizations must find a balance between having enough social controls to maintain order and rule compliance while also permitting employees with the discretion that they need to be creative and productive.

It is also possible to consider which moderated relationships did *not* emerge as significant for autonomy and mobility. Job autonomy x negative affect significantly predicted CWB-O, yet there was no relationship evident with CWB-I. It is possible that CWB-O is predominantly the surreptitious behaviors that employees enact when no one is monitoring them (e.g., stealing supplies, dragging out work to get overtime), and when one has high levels of autonomy and thus low levels of monitoring, the relationship described above emerges. In contrast, CWB-I predominantly consists of those behaviors that one cannot disguise if one did them (e.g., making fun of someone, cursed at someone, acted rudely towards someone), and levels of monitoring and structure at work would have little impact upon whether CWB-I are enacted or not. For job mobility, relationships with both CWB-O and CWB-I were evident, perhaps because job mobility is based upon one's own perceptions of freedom to be able to leave the organization, and thus one is not constrained to act in accordance with rules towards either the organization as a whole or towards any particular individuals in the organization.

Another distinction between these two job characteristics was that, as hypothesized, job autonomy interacted with negative affect and had no moderated relationships with interpersonal justice, yet job mobility interacted with both negative affect and interpersonal justice. According to the rationale indicated above, perceiving high job autonomy cannot help to restore justice associated with interpersonal mistreatment, yet leaving the organization for a different company can help to restore this type of justice. The evidence from this study supports this rationale.

One last point about the non-significant relationships for job characteristics is that job autonomy and job mobility only had moderated relationships with CWBs, yet they were

unrelated to OCBs, work-family conflict and job search behaviors. The lack of relationship with OCBs was consistent with my hypotheses (i.e., no relationships expected for OCBs), yet the non-significant results for work-family conflict and job search behaviors were not. As described above, the only significant relationship with job search behaviors was a direct path to interpersonal aggression at work, thus none of the moderated relationships emerged as significant for job search behaviors. However, it is possible that job mobility may have interacted with the psychological processes to predict job search behaviors had there been increased variance on this measure, yet the economy was fairly poor at the time of data collection and that this likely created a restriction of range on job mobility. With regard to work-family conflict, it appeared that levels of autonomy or job mobility had little influence on the relationships between psychological processes and WFC. When one experiences negative affect at work, one is likely to have negative mood spillover to the home context and the associated work-family conflict, regardless of whether one has autonomy at work. While job mobility may have moderated this relationship if the measures had increased variability, this is an empirical question that needs to be investigated in the future.

Target Characteristics as Moderators

The moderation results for target characteristics also revealed a consistent pattern of results that emerged for both hostility and neuroticism for OCBs. More specifically, people with high levels of dispositional hostility (or neuroticism) were likely to enact low levels of OCBs regardless, whereas those people who were low in hostility (or neuroticism) had substantially different levels of OCBs depending upon whether they were disgruntled or not (i.e., perceived injustice, had negative affect at work). That is,

contrary to expectations, those people who were most sensitive to high versus low levels of interpersonal justice and negative affect at work were those people who were low on hostility. This finding calls into question a conclusion from the OCB literature, which is that OCBs are associated with positive affective states and altruistic motives (George, 1991; George & Brief, 1992), and that are unrelated to negative affect (Spector & Fox, 2002; Lee & Allen, 2002; Miles et al., 2002).). The results presented here would suggest that for people low on hostility and/or neuroticism, negative affective states should indeed be associated with low levels of OCBs. In contrast, people with high hostility and/or neuroticism will tend to enact low levels of OCBs regardless. It is possible that research has previously confounded dispositional and state negativity when looking at relationships with OCBs (i.e., scholars have not controlled for dispositional negativity), thus this is one potential avenue for future inquiry.

In addition to the moderation results of hostility for OCBs, dispositional hostility interacted with interpersonal justice to predict both CWB-I and work-family conflict. These two interactions were similar in that for people low on hostility, levels of CWB-I and/or work-family conflict are influenced by perceived interpersonal justice, yet for people high on hostility, they tend to report high levels of CWB-I and/or work-family conflict regardless. There was a main effect for hostility in both cases (qualified by the interaction), but overall these results were inconsistent with my expectations because hostile people were not the people who were most sensitive to injustices. These results support those presented in the paragraph above in that they demonstrate that high hostility people tend to enact negative behavioral outcomes across the board, and it is

actually the low hostility people whose behaviors are more highly impacted by the extent to which they are disgruntled (in this case, their levels of interpersonal justice).

These results for hostility x interpersonal justice again point to the influence of dispositional hostility on negative outcomes, but in this case, both of these outcomes are related to forms of conflict (i.e., WFC) and/or counter-aggression (i.e., CWB-I). I had originally proposed hostility interactions for all behavioral outcomes, yet it seems that the hostility x interpersonal justice interactions are most closely linked to behaviors that are interpersonal in nature and that have the potential for hostile actions. If it is the case that dispositionally hostile people are more likely to have low levels of self-control and inhibition, they tend to make hostile attributions, and they react more severely when faced with a threatening situation (Buss, 1961; Douglas & Martinko, 2001; Geen, 1990), it would be no surprise that interpersonal situations at work would elicit CWB-I and that hostile people would also tend to have high levels of conflict at home. For low hostility people, however, the role of interpersonal justice perceptions in predicting outcomes may only emerge as important in situations that are interpersonal in nature (such as in interactions with co-workers or with family members). CWB-O behaviors are more impersonal (e.g., putting little effort into work, falsifying receipts, dragging out work to get overtime) and thus interpersonal justice perceptions do not interact with hostility to predict them. This explanation is necessarily speculative due to the lack of guiding research or theory on this issue, but it seems to be consistent with the nature of interpersonal justice and its importance for behaviors in interpersonal contexts.

Perpetrator Characteristics as Moderators

Lastly, the exploration of differential relationships associated with being subjected to interpersonal aggression from a supervisor versus from a coworker was another contribution of this study. I hypothesized that relationships with CWB-O and OCB-O would be more prevalent when a supervisor was the aggressor because employees would hold the organization responsible, yet relationships with CWB-I and OCB-I would be more prevalent when a coworker was the aggressor. The results of moderated SEM suggested that there was no evidence for differential relationships in the model based upon whether the perpetrator of the aggression was one's supervisor or a coworker. Indeed, *no* relationships in the supervisor versus coworker aggression models differed significantly, and as such, the evidence from this study suggests that aggression has parallel relationships with psychological processes and behavioral outcomes, regardless of the source of the aggression.

This lack of supervisor versus coworker moderation may be contrary to my initial hypotheses yet it is consistent with arguments made in the workplace bullying literature regarding the negative impact of bullying regardless of who is the bully. More specifically, bullying research has consistently demonstrated that persistent and frequent abuse is an organizational stressor associated with negative psychological and health outcomes (Davenport et al., 2002; Leymann, 1996; Namie & Namie, 2000), no matter whether the perpetrator is a supervisor, coworker or even a customer (Neuman & Keashly, 2003a). Indeed, it is often the case that the bullying comes from more than one target, and it is possible that both the supervisor and coworkers are sources of abuse (Hoel et al., 2001; Leymann, 1996). Thus, based upon the results of this study, it appears

that frequent interpersonal aggression from a supervisor and from a coworker had similar relationships with the variables in my model. Such a finding is important to communicate in the aggression literature, especially since aggression from coworkers has been neglected in a handful of recent high-profile publications (e.g., Tepper, 20002; Tepper et al., 2001; Zellars et al., 2002).

One possibility for future research on the nature of the perpetrator would be to examine whether targets' outcomes differ depending upon whether it is a supervisor alone, a coworker alone, or whether it is a combination of both supervisors and coworkers who are the sources of interpersonal aggression. It is likely that the most severe negative behavioral reactions to interpersonal aggression occur when one receives interpersonal aggression from *both* the supervisor and one's coworkers. In such a situation, targets may be especially prone to engage in job search behaviors, and may be most likely to have negative spillover to the family context. However, if the supervisor and coworkers are all aligned against the target, it may be difficult for the target to enact CWBs unless they are very secretive (e.g., sabotaging equipment when no one is looking) because any misconduct could be reported by anyone, which could lead to further abuses. Thus, future research should examine the interaction between supervisor and coworker aggression in predicting the nature of targets' behavioral outcomes.

In summary, there were a number of moderated relationships that were discovered, evidencing that job autonomy, job mobility, dispositional hostility and neuroticism all had significant moderated relationships with the psychological processes in predicting behavioral outcomes. The moderated mediation analyses did not provide support for a linkage between interpersonal aggression and behavioral outcomes through these

moderators. Thus, interpersonal aggression predicts negative cognitive and emotional processes, and these cognitive and emotional processes interact with these job and target characteristics to predict outcomes, yet there was no support for a full moderated, mediated model for any of the behavioral outcomes. As discussed in the mediation results above, future research is needed to investigate the mediational role of *other* psychological processes (e.g., appraisal of aggression). The relationship between interpersonal aggression and behavioral outcomes may not be explained by the cognitive and emotional processes included in the current study, yet variables such as perceived intent to harm and blame may also interact with the moderating factors examined here to predict outcomes.

Limitations

As with all research, there are limitations associated with this study. First, this was a survey study that involved collecting all data from a single source at a single point in time. There are two issues that arise from this methodology. The first is common methods or single-source bias (Campbell & Fiske, 1959; Doty & Glick, 1998; Podsakoff & Organ, 1986; Spector, 1987), which was discussed in depth in the methods section. I took steps to reduce the impact of this bias, yet it could not be entirely eliminated. However, the correlations and confirmatory factor analysis results provide some evidence against the notion that the observed relationships are due to this bias. An examination of the zero-order correlations in Table 4 revealed that there were several relationships that were at or near .00, and numerous non-significant correlations, which is inconsistent with the notion that all relationships would be inflated due to a single source. Furthermore, the results of confirmatory factor analyses for interpersonal aggression at work and

CWBs provided clear evidence for two-factor solutions, which is also inconsistent with a single-source explanation for the results (c.f., Doty & Glick, 1998). In addition, it is important to recognize that single-source response bias cannot account for interaction effects because method variance should not vary over levels of a multiplicative interaction variable (Tepper et al., 2001), thus the moderation results were not inflated by this bias. Finally, I controlled for the effects of several covariates (including socially desirable responding) in each of my analyses, which provided a very strict test of the hypotheses and instills confidence that the results are indeed due to the substantive constructs of interest (e.g., interpersonal aggression) and not unrelated factors or response biases.

A second issue that arises from my chosen methodology is that it is not possible for me to infer any causality in the relationships. Although my proposed theoretical model clearly had a causal ordering of variables, the cross-sectional data do not permit causal inferences as discussed in greater detail above. Longitudinal data gathered from multiple different sources would be ideal for reducing these limitations and to provide a compliment to the method chosen here. For instance, having all members of a work unit keep diaries of their aggressive experiences at work for a period of a month or more would be one way to isolate causal effects and to also be able to examine multiple parties' perspectives and interpretations of their interpersonal aggression experiences. It would also be preferable to obtain at least some outcome data from organizational records and/or supervisors.

Related to the above, a third limitation is that the measure of interpersonal aggression at work assessed participants' perceptions of the extent to which these behaviors had

occurred, and thus there was no “objective” indicator of the actual amount of aggression that they had received. Although experiences of aggression are inherently perceptual (Folger & Skarlicki, 1998), it is important for organizations to understand the extent to which interpersonal abuses are actually occurring so that they may intervene appropriately. As noted above, gathering data on aggressive incidents from multiple parties would be one way to address this issue in the future. Another possibility would be to conduct unit-level research that examines whether members of units share similar perceptions of the extent to which interpersonal aggression is condoned. As noted by Schneider (2000), when psychological experiences in an organization are shared, this is a property of the organization. If unit members all agree that interpersonal aggression occurs frequently and that it is not punished, then this is the “reality” about which management should be concerned.

A fourth limitation deals with the sample used for this research and the generalizability of the results. Most organizational field research investigates the experiences of employees within a given organizational context, yet I prioritized external validity in this study by attempting to gather data from a representative sample of working adults in the local population. It should be recognized that no formal sampling procedures were undertaken and thus the sample should not be assumed to be representative of the larger U.S. population. The Maryland Motor Vehicle Administration offices were a useful site to gather data from a wide range of people, yet only the people in my sample were limited to Maryland residents who either have driver’s licenses or who have a vehicle registered in the state. In addition, the proximity of these offices to the Washington D.C. metro area may have meant that particular

occupations and/or industries (e.g., administrative positions, federal agencies) may have been over-represented. Despite these sample characteristics, this sample is very representative compared to many found in organizational journals, and as such, I expect the results to be generalizable across a wide variety of contexts. This is, however, an empirical question that needs to be examined in future research.

A fifth limitation of this study deals with the measure of aggression that was employed, the AES (Glomb, 2001; Glomb & Liao, 2003), and its factor structure. In particular, there are 20 very diverse aggressive acts that comprise the AES, yet there is not yet any evidence for any underlying factor structure other than a unidimensional structure. This is surprising given that Buss's (1961) typology of types of aggression has been so widely employed by scholars as a heuristic for understanding the different forms of aggression. It is possible that my results for the construct of aggression in this study are limited due to the unidimensional nature of the measure that was employed. Unfortunately, the AES is the only existing aggression scale that (to my knowledge) is in line with my definition of interpersonal aggression at work and that has been used in published aggression research, and although other measures are in the validation phase (e.g., Neuman & Keashly, 2003b), they may not prove to have a better factor structure and they are also very lengthy for field research. Future research would benefit from extensive scale development and validation studies to establish a measure of aggression that is psychometrically sound, yet is also theoretically consistent with Buss's (1961) framework or some other similar framework that would permit researchers to examine relationships for different forms of aggression.

A sixth and final limitation deals with the specificity of predictions associated with examining interpersonal aggression at work as a stressor at work, as well as the lack of timeframe in the survey. My focus in this research was to understand the range of behavioral outcomes associated with *regularly* experiencing aggression at work, and thus I studied aggression as an organizational stressor. However, as described above, most aggression research has examined single episodes of aggression. According to Ajzen and Fishbein's (1977) theory of reasoned action, if one is interested in predicting a specific behavior (e.g., retaliation in a particular incident), then it is best for one to assess specific attitudes and intentions. If, however, one is interested in predicting general behaviors then it is preferable to use general attitudes as predictors. This principle guided the approach to survey development for this research, and I maintained a focus upon general measures throughout the survey. However, one difficulty created by this approach is that the measures might be so general that participants are actually responding to different scales with different levels of specificity and/or with different timeframes in mind. This is a limitation of the current research. Future research should examine whether participants find it meaningful to impose a uniform timeframe upon the full survey (e.g., think about your experiences over the past 6 months), and if this is done, determine the implications of these changes for scales' reliabilities and validities.

Implications for Organizations

While research on targets' experiences of interpersonal aggression has important theoretical ramifications for scholars, research on this topic is even more essential due to its important practical implications for employees' well-being, organizational effectiveness, and even public policy. Interpersonal aggression at work has likely existed

since the dawn of work institutions, yet it is striking that this topic has only received research attention in the U.S. organizational literature over the past decade. Aggression is clearly a source of stress for employees, and it is well established that workplace stressors have a negative impact upon employee well-being (Kahn & Byosiere, 1992), yet books on employee stress and well-being typically fail to address this topic. Indeed, in the recent *Handbook of Occupational Health Psychology* (Quick & Tetrick, 2003), there are no chapters on topics such as interpersonal aggression or interpersonal treatment, despite their demonstrated implications for employees' wellness. In order for practitioners to address this important social problem, it is first necessary for scholars to widely disseminate research on the topic and to convince managers about the severity of aggression.

One way to attract organizational decision-makers' attention is to demonstrate that when interpersonal aggression frequently occurs, targets behave in a manner that is contrary to the organization's best interest. Research such as this helps to demonstrate that employees who experience interpersonal aggression are likely to engage in negative acts, which include CWB-I, CWB-O and job search behaviors. Each of these behavioral outcomes have costs associated with them, many of which can be extremely detrimental for the organization (e.g., sabotaging equipment, high turnover replacement costs, damaging the organization's reputation). As such, interpersonal aggression may impair organizational effectiveness if representatives of the organization do little to deter these negative acts. Robinson and O'Leary-Kelly (1998) demonstrated that social norms influence the extent to which deviant behaviors are performed, which suggests that managers can work to establish an organizational culture that is intolerant of

interpersonally aggressive acts (c.f., Davenport et al., 2002). Through interventions such as interpersonal skills training, 360 degree feedback for managers to inform them of subordinates' perceptions of their interpersonal treatment, visibly and harshly punishing instances of aggression, and simply having managers model the positive behaviors expected of all employees, organizations may be able to reduce levels of interpersonal aggression. Future research should evaluate the team- and organizational-level outcomes associated with interpersonal aggression, yet this study begins to illustrate to organizational decision makers that allowing interpersonal aggressive behaviors to proliferate is clearly not in the organization's best interest.

Finally, regarding implications for public policy, some authors have argued that interpersonal aggression at work is a problem on par or even more severe than other social problems such as sexual harassment, and that legislation is needed to protect all employees' right to both physically *and* psychologically healthy at work (Leymann, 1996; Namie & Namie, 2000). The U.S. does not have any laws specific to persistent interpersonal aggression (bullying), however anti-bullying legislation has been enacted in several other countries where researchers and advocates have widely publicized the nature of bullying (e.g., Sweden, Great Britain, Australia, France). There are currently grassroots lobbying efforts underway in Washington, Oregon, Oklahoma and California, and a national law is under consideration in Canada (Workplace Bullying & Trauma Institute, 2004). Increased public awareness of interpersonal aggression at work through media attention, popular books, and Internet self-help and advice groups (e.g., Namie, Namie, Stein & Stein, 2004) suggests that interest among the U.S. public will only increase over time. It is essential that we as scholars have fully understood the nature of

the problem and individuals' reactions to it in order to better inform the public and policy-makers. This research brings us one step closer to this goal.

Conclusion

In conclusion, interpersonal aggression at work is abundant, and the results of this research demonstrated that targets of frequent interpersonal aggression tend to enact counterproductive behaviors aimed at other organizational members and at the organization as a whole, and they also engage in behaviors aimed at finding other employment. Aggression targets also tend to believe that they have experienced interpersonal injustices and they frequently experience negative emotional states at work. Finally, characteristics of the job and the target moderate several of the relationships between the psychological processes and behavioral outcomes. The processes through which interpersonal aggression translates into behaviors are complex and future work is needed, yet the results of this study clearly indicate that interpersonal aggression is associated with behaviors that are counterproductive for both targets and their organizations.

APPENDIX A – Research Scales

Please see the following 16 pages for the scales included in this dissertation, and a key to the subscales and reverse-coded items (if applicable) in each.

Interpersonal Aggression from Supervisor

Glomb's (2001) Aggressive Experiences Scale (AES), Target

INSTRUCTIONS: The following items ask you to estimate how often YOUR SUPERVISOR at your current job has engaged in the following behaviors and YOU were the TARGET. Items should be endorsed only when YOU were the TARGET of the behavior. Please circle ONE response for each of these questions.

<i>How often has your SUPERVISOR engaged in this behavior and YOU were the target?</i>		Never	1 or 2 Times a Year	3 or 4 Times a Year	About Once a Month	Once a Week or More
1.	Making angry gestures (e.g., pounding fist, rolling eyes)	1	2	3	4	5
2.	Avoiding you	1	2	3	4	5
3.	Making you look bad	1	2	3	4	5
4.	Yelling or raising their voice	1	2	3	4	5
5.	Withholding information from you	1	2	3	4	5
6.	Sabotaging your work	1	2	3	4	5
7.	Swearing at you	1	2	3	4	5
8.	Withholding resources (e.g., supplies, equipment) needed to do your job	1	2	3	4	5
9.	Physically assaulting you	1	2	3	4	5
10.	Using hostile body language	1	2	3	4	5
11.	Insulting or criticizing you (including sarcasm)	1	2	3	4	5
12.	Failing to correct false information about you	1	2	3	4	5
13.	Interrupting or "cutting you off" while speaking	1	2	3	4	5
14.	Getting "in your face"	1	2	3	4	5
15.	Spreading rumors	1	2	3	4	5
16.	Making threats	1	2	3	4	5
17.	Damaging property	1	2	3	4	5
18.	Whistle-blowing or telling others about your negative behavior	1	2	3	4	5
19.	Belittling your opinions in front of others	1	2	3	4	5
20.	Giving you the "silent treatment"	1	2	3	4	5

Interpersonal Aggression from Coworker(s)
 Glomb's (2001) Aggressive Experiences Scale (AES), Target

INSTRUCTIONS: The following items ask you to estimate how often YOUR COWORKER(S) at your current job have engaged in the following behaviors and YOU were the TARGET. Items should be endorsed only when YOU were the TARGET of the behavior. Please circle ONE response for each of these questions.

<i>How often has a COWORKER or COWORKERS engaged in this behavior and YOU were the target?</i>	Never	1 or 2 Times a Year	3 or 4 Times a Year	About Once a Month	Once a Week or More
1. Making angry gestures (e.g., pounding fist, rolling eyes)	1	2	3	4	5
2. Avoiding you	1	2	3	4	5
3. Making you look bad	1	2	3	4	5
4. Yelling or raising their voice	1	2	3	4	5
5. Withholding information from you	1	2	3	4	5
6. Sabotaging your work	1	2	3	4	5
7. Swearing at you	1	2	3	4	5
8. Withholding resources (e.g., supplies, equipment) needed to do your job	1	2	3	4	5
9. Physically assaulting you	1	2	3	4	5
10. Using hostile body language	1	2	3	4	5
11. Insulting or criticizing you (including sarcasm)	1	2	3	4	5
12. Failing to correct false information about you	1	2	3	4	5
13. Interrupting or "cutting you off" while speaking	1	2	3	4	5
14. Getting "in your face"	1	2	3	4	5
15. Spreading rumors	1	2	3	4	5
16. Making threats	1	2	3	4	5
17. Damaging property	1	2	3	4	5
18. Whistle-blowing or telling others about your negative behavior	1	2	3	4	5
19. Belittling your opinions in front of others	1	2	3	4	5
20. Giving you the "silent treatment"	1	2	3	4	5

Counterproductive Work Behaviors
Bennett & Robinson (2000)

INSTRUCTIONS: Read each statement below carefully. Determine how often you have engaged in each of these behaviors at your current job. Circle the number that best corresponds with your answer.

<i>How often have you engaged in the following behaviors at work?</i>	Never	Once A Year	Twice A Year	Several Times A Year	Monthly	Weekly	Daily
1. Made fun of someone at work	1	2	3	4	5	6	7
2. Said something hurtful to someone at work	1	2	3	4	5	6	7
3. Cursed at someone at work	1	2	3	4	5	6	7
4. Played a mean prank on someone at work	1	2	3	4	5	6	7
5. Acted rudely toward someone at work	1	2	3	4	5	6	7
6. Publicly embarrassed someone at work	1	2	3	4	5	6	7
7. Taken property from work without permission	1	2	3	4	5	6	7
8. Spent too much time fantasizing or daydreaming instead of working	1	2	3	4	5	6	7
9. Falsified a receipt to get reimbursed for more money than you spent on business expenses	1	2	3	4	5	6	7
10. Taken an additional or longer break than is acceptable at your workplace	1	2	3	4	5	6	7
11. Come in late to work without permission	1	2	3	4	5	6	7
12. Littered your work environment	1	2	3	4	5	6	7
13. Neglected to follow your boss's instructions	1	2	3	4	5	6	7
14. Intentionally worked slower than you could have worked	1	2	3	4	5	6	7
15. Discussed confidential company information with an unauthorized person	1	2	3	4	5	6	7
16. Used an illegal drug or consumed alcohol on the job	1	2	3	4	5	6	7
17. Put little effort into your work	1	2	3	4	5	6	7
18. Dragged out work in order to get overtime	1	2	3	4	5	6	7

Items #1-6 are interpersonal-directed CWBs
Items #7-18 are organization-directed CWBs

Organizational Citizenship Behaviors

Lee & Allen (2002)

INSTRUCTIONS: Read each statement below carefully. Determine how often you engage in each of these behaviors at your current job. Circle the number that best corresponds with your answer.

<i>How often have you engaged in the following behaviors at work?</i>	Never	Very Rarely	Rarely	Sometimes	Often	Very Often	Always
1. Help others who have been absent	1	2	3	4	5	6	7
2. Willingly give your time to help others who have work-related problems	1	2	3	4	5	6	7
3. Adjust your work schedule to accommodate other employees' requests for time off	1	2	3	4	5	6	7
4. Go out of the way to make newer employees feel welcome in the work group	1	2	3	4	5	6	7
5. Show genuine concern and courtesy towards coworkers, even under the most trying business or personal situations	1	2	3	4	5	6	7
6. Give up time to help others who have work or non-work problems	1	2	3	4	5	6	7
7. Assist others with their duties	1	2	3	4	5	6	7
8. Share personal property with others to help their work	1	2	3	4	5	6	7
9. Attend functions that are not required but that help the organizational image	1	2	3	4	5	6	7
10. Keep up with developments in the organization	1	2	3	4	5	6	7
11. Defend the organization when other employees criticize it	1	2	3	4	5	6	7
12. Show pride when representing the organization in public	1	2	3	4	5	6	7
13. Offer ideas to improve the functioning or the organization	1	2	3	4	5	6	7
14. Express loyalty toward the organization	1	2	3	4	5	6	7
15. Take action to protect the organization from potential problems	1	2	3	4	5	6	7
16. Demonstrate concern about the image of the organization	1	2	3	4	5	6	7

Items #1-8 are interpersonal-directed OCBs

Items #9-16 are organizational-directed OCBs

Work-Family Conflict

Netemeyer, Boles, and McMurrian (1996)

INSTRUCTIONS: Read each statement below carefully. Determine how much you agree or disagree with each of the statements with regard to your current job. Circle the number that best corresponds with your answer.

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
1. The demands of my work interfere with my home and family life.	1	2	3	4	5	6	7
2. The amount of time my job takes up makes it difficult to fulfill family responsibilities.	1	2	3	4	5	6	7
3. Things I want to do at home do not get done because of the demands my job puts on me.	1	2	3	4	5	6	7
4. My job produces strain that makes it difficult to fulfill family duties.	1	2	3	4	5	6	7
5. Due to work-related duties, I have to make changes to my plans for family activities.	1	2	3	4	5	6	7
6. Worry or concern over my work interferes with my non-work activities and interests.	1	2	3	4	5	6	7
7. I can't sleep because of thinking about things at work that I have to get done.	1	2	3	4	5	6	7
8. After work, I come home too tired to do some of the things I need to do.	1	2	3	4	5	6	7
9. Because my work is demanding, at times I am irritable at home.	1	2	3	4	5	6	7
10. The demands of my job make it difficult to be relaxed all the time at home.	1	2	3	4	5	6	7

Items #1-5 are from Netemeyer et al. (1996)

Items #6-7 are from O'Driscoll et al. (1992)

Items #8-10 are additional items written for this study

Job Search Behaviors

Blau (1994)

INSTRUCTIONS: Read each question below carefully. Determine how often you have engaged in each of these behaviors within the last 6 months. Then, choose your response to the right of the question, and circle it.

		Never (0 Times)	Rarely (1 or 2 Times)	Occasionally (3 to 5 Times)	Frequently (6 to 9 Times)	Very Frequently (At Least 10 Times)
1.	Read the help wanted/classified ads in a newspaper, journal, internet database, or professional association	1	2	3	4	5
2.	Listed yourself as a job applicant in a newspaper, journal, internet database, or professional association	1	2	3	4	5
3.	Prepared/revised your resume	1	2	3	4	5
4.	Sent out resumes to potential employers	1	2	3	4	5
5.	Filled out a job application	1	2	3	4	5
6.	Read a book or article about getting a job or changing jobs	1	2	3	4	5
7.	Had a job interview with a prospective employer	1	2	3	4	5
8.	Talked with friends or relatives about possible job leads	1	2	3	4	5
9.	Contacted an employment agency, executive search firm, or state employment service	1	2	3	4	5
10.	Spoke with previous employers or business acquaintances about their knowing of potential job leads	1	2	3	4	5
11.	Contacted a prospective employer	1	2	3	4	5
12.	Used current within-company resources (e.g., colleagues) to generate potential job leads	1	2	3	4	5

Interpersonal Justice

Adapted from Colquitt (2001) and additional items written

INSTRUCTIONS: Read each statement below carefully. Determine how much you agree or disagree with each of the statements for your current job. Circle the number that best corresponds with your answer.

<i>With regard to <u>your interpersonal interactions with others at work</u>, to what extent...</i>		To a Very Small Extent	To a Small Extent	Somewhat	To a Large Extent	To a Very Large Extent
1.	Do other employees treat you in a polite manner?	1	2	3	4	5
2.	Do other employees treat you with dignity?	1	2	3	4	5
3.	Do other employees treat you with respect?	1	2	3	4	5
4.	Have other employees refrained from making improper remarks or comments?	1	2	3	4	5
5.	Do other employees act inconsiderately towards you?	1	2	3	4	5
6.	Do other employees treat you in an unfair manner?	1	2	3	4	5
7.	Do other employees treat you kindly?	1	2	3	4	5

Items #1-4 are adapted from Colquitt (2001)

Items #5-7 were additional items written for this study

Items 5 and 6 are reverse-coded.

Items 4 and 5 had low item-total correlations and were removed from the final scale used in hypothesis testing.

Negative Affect at Work

Watson, Clark, and Tellegen's (1988) PANAS scale

INSTRUCTIONS: Read each question below carefully. Decide which response fits best with your feelings at your current job. Circle the number that best corresponds with your answer.

<i>How often do you feel ___ <u>at work</u>?</i>		Very Slightly or Not At All	A Little	Moderately	Quite a Bit	Extremely Frequently
1.	How often do you feel <i>scared</i> at work?	1	2	3	4	5
2.	How often do you feel <i>upset</i> at work?	1	2	3	4	5
3.	How often do you feel <i>nervous</i> at work?	1	2	3	4	5
4.	How often do you feel <i>guilty</i> at work?	1	2	3	4	5
5.	How often do you feel <i>hostile</i> at work?	1	2	3	4	5
6.	How often do you feel <i>afraid</i> at work?	1	2	3	4	5
7.	How often do you feel <i>distressed</i> at work?	1	2	3	4	5
8.	How often do you feel <i>jittery</i> at work?	1	2	3	4	5
9.	How often do you feel <i>ashamed</i> at work?	1	2	3	4	5
10.	How often do you feel <i>irritable</i> at work?	1	2	3	4	5

Job Autonomy

Spector & Fox's (2003) Factual Autonomy Scale (FAS)

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

<i>In your present job, how often do you have to ask permission...</i>		Never	Rarely	Sometimes	Quite Often	Extremely Often or Always
1.	to take a rest break?	1	2	3	4	5
2.	to take a lunch/mean break?	1	2	3	4	5
3.	to leave early for the day?	1	2	3	4	5
4.	to change the hours you work?	1	2	3	4	5
5.	to leave your office or workstation?	1	2	3	4	5
6.	to come late to work?	1	2	3	4	5
7.	to take time off?	1	2	3	4	5

<i>How often do the following events occur in your present job?</i>		Never	Once or Twice	Once or Twice per Month	Once or Twice per Week	Every Day
8.	How often does someone tell you what you are to do?	1	2	3	4	5
9.	How often does someone tell you when you are to do your work?	1	2	3	4	5
10.	How often does someone tell you how you are to do your work?	1	2	3	4	5
<i>How often...</i>						
11.	are you required to work closely with your supervisor?	1	2	3	4	5
12.	are you required to work closely with other coworkers?	1	2	3	4	5
13.	do you have the flexibility to choose the coworkers with whom you interact?	1	2	3	4	5
14.	can you have privacy at work when you want it?	1	2	3	4	5

Items #1-10 are from the Factual Autonomy Scale (Spector & Fox, 2003)

Items #11-14 are additional items written for this study

Items #1-12 were reverse-coded such that high scores on this scale indicate high levels of autonomy.

Job Mobility
Tepper (2000)

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

1. If I were to quit my job, I could find another job that is just as good.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
2. I would have no problem finding an acceptable job if I quit.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Trait Hostility

Watson & Clark (1992) PANAS-X hostility subscale

INSTRUCTIONS: When responding to the questions below, think about how you feel in general, across most situations. Then, choose your response to the right of the question, and circle it.

<i>How often do you <u>generally</u> feel ___?</i>		Very Slightly or Not At All	A Little	Moderately	Quite a Bit	Extremely Frequently
1.	How often do you generally feel <i>angry</i> ?	1	2	3	4	5
2.	How often do you generally feel <i>irritable</i> ?	1	2	3	4	5
3.	How often do you generally feel <i>hostile</i> ?	1	2	3	4	5
4.	How often do you generally feel <i>scornful</i> ?	1	2	3	4	5
5.	How often do you generally feel <i>disgusted</i> ?	1	2	3	4	5
6.	How often do you generally feel <i>loathing</i> ?	1	2	3	4	5

Neuroticism
Goldberg (1999)

INSTRUCTIONS: Read each question below carefully. Then, please choose the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex you are, and roughly the same age. Please select your response to the right of the question, and circle it.

		Very Inaccurate	Moderately Inaccurate	Neither Inaccurate nor Accurate	Moderately Accurate	Very Accurate
1.	I am relaxed most of the time.	1	2	3	4	5
2.	I get stressed out easily.	1	2	3	4	5
3.	I worry about things.	1	2	3	4	5
4.	I change my mood a lot.	1	2	3	4	5
5.	I often feel blue.	1	2	3	4	5
6.	I get irritated easily.	1	2	3	4	5
7.	I am easily disturbed.	1	2	3	4	5
8.	I get upset frequently.	1	2	3	4	5
9.	I seldom feel blue.	1	2	3	4	5
10.	I have frequent mood swings.	1	2	3	4	5

Items 1 and 9 are reverse-coded.

Organizational Constraints (Covariate)
Spector and Jex (1998)

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

<i>How often do you find it difficult or impossible to do your current job because of _____ ?</i>	Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1. Poor equipment or supplies	1	2	3	4	5
2. Organizational rules and procedures	1	2	3	4	5
3. Other employees	1	2	3	4	5
4. Your supervisor	1	2	3	4	5
5. Lack of equipment or supplies	1	2	3	4	5
6. Inadequate training	1	2	3	4	5
7. Interruptions by other people	1	2	3	4	5
8. Lack of necessary information about what to do or how to do it	1	2	3	4	5
9. Conflicting job demands	1	2	3	4	5
10. Inadequate help from others	1	2	3	4	5
11. Incorrect instructions	1	2	3	4	5

Distributive and Procedural Justice (Covariates)

Colquitt (2001)

INSTRUCTIONS: When answering the following questions, first think about rewards that you have received as an employee of your current employer (for example, pay, promotions, recognition). Next, think about the procedures that were used to arrive at these rewards. Read each statement, choose your response to the right of the question, and circle it.

<i>With regard to <u>rewards</u>, to what extent...</i>		To a Very Small Extent	To a Small Extent	Somewhat	To a Large Extent	To a Very Large Extent
1.	Do your rewards reflect the effort you have put into your work?	1	2	3	4	5
2.	Are your rewards appropriate for the work you have completed?	1	2	3	4	5
3.	Do your rewards reflect what you have contributed to the organization?	1	2	3	4	5
4.	Are your rewards justified, given your performance?	1	2	3	4	5
<i>With regard to <u>procedures</u>, to what extent...</i>						
5.	Have you been able to express your views and feelings during those procedures?	1	2	3	4	5
6.	Have you had influence over the rewards arrived at by those procedures?	1	2	3	4	5
7.	Have those procedures been applied consistently?	1	2	3	4	5
8.	Have those procedures been free of bias?	1	2	3	4	5
9.	Have those procedures been based on accurate information?	1	2	3	4	5
10.	Have you been able to appeal the outcome arrived at by those procedures?	1	2	3	4	5
11.	Have those procedures upheld ethical and moral standards?	1	2	3	4	5

Items #1-4 are distributive justice

Items #5-11 are procedural justice

Quantitative Workload (Covariate)
Spector and Jex (1998)

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question and circle it.

<i>Please respond to the following questions about your workload in your current job.</i>		Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1.	How often does your job require you to work very fast?	1	2	3	4	5
2.	How often does your job require you to work very hard?	1	2	3	4	5
3.	How often does your job leave you with little time to get things done?	1	2	3	4	5
4.	How often is there a great deal to be done?	1	2	3	4	5
5.	How often do you have to do more work than you can do well?	1	2	3	4	5

Social Desirability (Covariate)

Reynolds (1982), short form of the Marlowe-Crowne social desirability scale

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question and circle it.

	True	False
1. It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
2. I sometimes feel resentful when I don't get my way.	T	F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	T	F
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.	T	F
5. No matter who I'm talking to, I'm always a good listener.	T	F
6. There have been occasions when I took advantage of someone.	T	F
7. I'm always willing to admit it when I make a mistake.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. I am always courteous, even to people who are disagreeable.	T	F
10. I have never been irked when people expressed ideas very different from my own.	T	F
11. There have been times when I was quite jealous of the good fortune of others.	T	F
12. I am sometimes irritated by people who ask favors of me.	T	F
13. I have never deliberately said something that hurt someone's feelings.	T	F

Items were coded such that 1 = true, 2 = false.

Items #1, 2, 3, 4, 6, 8, 11, and 12 are reverse-coded. As such, this scale is scored such that high means indicate a *low* level of social desirability.

APPENDIX B – Original Survey

Please see the following 10 pages for the original survey that was administered to participants.

INTERPERSONAL EXPERIENCES AT WORK SURVEY

Introduction and Instructions

This survey is part of a research project on interpersonal relations at work. It is being conducted by a researcher in the Department of Psychology at the University of Maryland. Your responses to this survey are extremely important and will be very helpful!

Please read the instructions for each section carefully. Then, proceed to answer the questions in each section. Please answer each question honestly. There are no right or wrong answers. It should take you about 30 minutes to complete this survey. When you have completed this survey, please return it to the survey administrator. If you have any questions or need assistance with this survey, please ask the survey administrator.

If you have any questions or comments about this survey, please contact the Principal Investigator, Jana Raver, Department of Psychology, University of Maryland, College Park, MD 20742; tel: 301-405-5934; e-mail: jraver@psyc.umd.edu.

THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY!

INSTRUCTIONS: Read each statement below carefully. Determine how often you engage in each of these behaviors at your current job. Circle the number that best corresponds with your answer.

<i>How often have you engaged in the following behaviors at work?</i>		Never	Very Rarely	Rarely	Sometimes	Often	Very Often	Always
1.	Help others who have been absent	1	2	3	4	5	6	7
2.	Willingly give your time to help others who have work-related problems	1	2	3	4	5	6	7
3.	Adjust your work schedule to accommodate other employees' requests for time off	1	2	3	4	5	6	7
4.	Go out of the way to make newer employees feel welcome in the work group	1	2	3	4	5	6	7
5.	Show genuine concern and courtesy towards coworkers, even under the most trying business or personal situations	1	2	3	4	5	6	7
6.	Give up time to help others who have work or non-work problems	1	2	3	4	5	6	7
7.	Assist others with their duties	1	2	3	4	5	6	7
8.	Share personal property with others to help their work	1	2	3	4	5	6	7
9.	Attend functions that are not required but that help the organizational image	1	2	3	4	5	6	7
10.	Keep up with developments in the organization	1	2	3	4	5	6	7
11.	Defend the organization when other employees criticize it	1	2	3	4	5	6	7
12.	Show pride when representing the organization in public	1	2	3	4	5	6	7
13.	Offer ideas to improve the functioning or the organization	1	2	3	4	5	6	7
14.	Express loyalty toward the organization	1	2	3	4	5	6	7
15.	Take action to protect the organization from potential problems	1	2	3	4	5	6	7
16.	Demonstrate concern about the image of the organization	1	2	3	4	5	6	7

INSTRUCTIONS: Read each statement below carefully. Determine how much you agree or disagree with each of the statements with regard to your current job. Circle the number that best corresponds with your answer.

		Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
1.	The demands of my work interfere with my home and family life.	1	2	3	4	5	6	7
2.	My job produces strain that makes it difficult to fulfill family duties.	1	2	3	4	5	6	7
3.	Things I want to do at home do not get done because of the demands my job puts on me.	1	2	3	4	5	6	7
4.	Due to work-related duties, I have to make changes to my plans for family activities.	1	2	3	4	5	6	7
5.	The amount of time my job takes up makes it difficult to fulfill family responsibilities.	1	2	3	4	5	6	7
6.	Worry or concern over my work interferes with my non-work activities and interests.	1	2	3	4	5	6	7
7.	I can't sleep because of thinking about things at work that I have to get done.	1	2	3	4	5	6	7
8.	After work, I come home too tired to do some of the things I need to do.	1	2	3	4	5	6	7
9.	Because my work is demanding, at times I am irritable at home.	1	2	3	4	5	6	7
10.	The demands of my job make it difficult to be relaxed all the time at home.	1	2	3	4	5	6	7

INSTRUCTIONS: Read each statement below carefully. Determine how often you have engaged in each of these behaviors at your current job. Circle the number that best corresponds with your answer.

<i>How often have you engaged in the following behaviors at work?</i>	Never	Once A Year	Twice A Year	Several Times A Year	Monthly	Weekly	Daily
1. Made fun of someone at work	1	2	3	4	5	6	7
2. Said something hurtful to someone at work	1	2	3	4	5	6	7
3. Cursed at someone at work	1	2	3	4	5	6	7
4. Played a mean prank on someone at work	1	2	3	4	5	6	7
5. Acted rudely toward someone at work	1	2	3	4	5	6	7
6. Publicly embarrassed someone at work	1	2	3	4	5	6	7
7. Taken property from work without permission	1	2	3	4	5	6	7
8. Spent too much time fantasizing or daydreaming instead of working	1	2	3	4	5	6	7
9. Falsified a receipt to get reimbursed for more money than you spent on business expenses	1	2	3	4	5	6	7
10. Taken an additional or longer break than is acceptable at your workplace	1	2	3	4	5	6	7
11. Come in late to work without permission	1	2	3	4	5	6	7
12. Littered your work environment	1	2	3	4	5	6	7
13. Neglected to follow your boss's instructions	1	2	3	4	5	6	7
14. Intentionally worked slower than you could have worked	1	2	3	4	5	6	7
15. Discussed confidential company information with an unauthorized person	1	2	3	4	5	6	7
16. Used an illegal drug or consumed alcohol on the job	1	2	3	4	5	6	7
17. Put little effort into your work	1	2	3	4	5	6	7
18. Dragged out work in order to get overtime	1	2	3	4	5	6	7

INSTRUCTIONS: Read each question below carefully. Determine how often you have engaged in each of these behaviors within the last 6 months. Then, choose your response to the right of the question, and circle it.

	Never (0 Times)	Rarely (1 or 2 Times)	Occasionally (3 to 5 Times)	Frequently (6 to 9 Times)	Very Frequently (At Least 10 Times)
1. Read the help wanted/classified ads in a newspaper, journal, internet database, or professional association	1	2	3	4	5
2. Listed yourself as a job applicant in a newspaper, journal, internet database, or professional association	1	2	3	4	5
3. Prepared/revised your resume	1	2	3	4	5
4. Sent out resumes to potential employers	1	2	3	4	5
5. Filled out a job application	1	2	3	4	5
6. Read a book or article about getting a job or changing jobs	1	2	3	4	5
7. Had a job interview with a prospective employer	1	2	3	4	5
8. Talked with friends or relatives about possible job leads	1	2	3	4	5
9. Contacted an employment agency, executive search firm, or state employment service	1	2	3	4	5
10. Spoke with previous employers or business acquaintances about their knowing of potential job leads	1	2	3	4	5
11. Contacted a prospective employer	1	2	3	4	5
12. Used current within-company resources (e.g., colleagues) to generate potential job leads	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Decide which response fits best with your feelings at your current job. Circle the number that best corresponds with your answer.

<i>How often do you feel ___ at work?</i>		Very Slightly or Not At All	A Little	Moderately	Quite a Bit	Extremely Frequently
1.	How often do you feel <i>active</i> at work?	1	2	3	4	5
2.	How often do you feel <i>scared</i> at work?	1	2	3	4	5
3.	How often do you feel <i>alert</i> at work?	1	2	3	4	5
4.	How often do you feel <i>upset</i> at work?	1	2	3	4	5
5.	How often do you feel <i>attentive</i> at work?	1	2	3	4	5
6.	How often do you feel <i>nervous</i> at work?	1	2	3	4	5
7.	How often do you feel <i>determined</i> at work?	1	2	3	4	5
8.	How often do you feel <i>guilty</i> at work?	1	2	3	4	5
9.	How often do you feel <i>enthusiastic</i> at work?	1	2	3	4	5
10.	How often do you feel <i>hostile</i> at work?	1	2	3	4	5
11.	How often do you feel <i>excited</i> at work?	1	2	3	4	5
12.	How often do you feel <i>afraid</i> at work?	1	2	3	4	5
13.	How often do you feel <i>inspired</i> at work?	1	2	3	4	5
14.	How often do you feel <i>distressed</i> at work?	1	2	3	4	5
15.	How often do you feel <i>interested</i> at work?	1	2	3	4	5
16.	How often do you feel <i>jittery</i> at work?	1	2	3	4	5
17.	How often do you feel <i>proud</i> at work?	1	2	3	4	5
18.	How often do you feel <i>ashamed</i> at work?	1	2	3	4	5
19.	How often do you feel <i>strong</i> at work?	1	2	3	4	5
20.	How often do you feel <i>irritable</i> at work?	1	2	3	4	5

INSTRUCTIONS: Read each statement below carefully. Determine how much you agree or disagree with each of the statements for your current job. Circle the number that best corresponds with your answer.

<i>With regard to your interpersonal interactions with others at work, to what extent...</i>		To a Very Small Extent	To a Small Extent	Somewhat	To a Large Extent	To a Very Large Extent
1.	Do people at work treat you in a polite manner?	1	2	3	4	5
2.	Do people at work treat you with dignity?	1	2	3	4	5
3.	Do people at work treat you with respect?	1	2	3	4	5
4.	Have people at work refrained from making improper remarks or comments?	1	2	3	4	5
5.	Do people at work act inconsiderately towards you?	1	2	3	4	5
6.	Do people at work treat you in an unfair manner?	1	2	3	4	5
7.	Do people at work treat you kindly?	1	2	3	4	5

INSTRUCTIONS: The following items ask you to estimate how often YOUR SUPERVISOR at your current job has engaged in the following behaviors and YOU were the TARGET. Items should be endorsed only when YOU were the TARGET of the behavior. Please circle ONE response for each of these questions.

<i>How often has your current SUPERVISOR engaged in this behavior and YOU were the target?</i>	Never	1 or 2 Times A Year	3 or 4 Times A Year	About Once A Month	Once A Week or More
1. Making angry gestures (e.g., pounding fist, rolling eyes)	1	2	3	4	5
2. Avoiding you	1	2	3	4	5
3. Making you look bad	1	2	3	4	5
4. Yelling or raising their voice	1	2	3	4	5
5. Withholding information from you	1	2	3	4	5
6. Sabotaging your work	1	2	3	4	5
7. Swearing at you	1	2	3	4	5
8. Withholding resources (e.g., supplies, equipment) needed to do your job	1	2	3	4	5
9. Physically assaulting you	1	2	3	4	5
10. Using hostile body language	1	2	3	4	5
11. Insulting or criticizing you (including sarcasm)	1	2	3	4	5
12. Failing to correct false information about you	1	2	3	4	5
13. Interrupting or "cutting you off" while speaking	1	2	3	4	5
14. Getting "in your face"	1	2	3	4	5
15. Spreading rumors	1	2	3	4	5
16. Making threats	1	2	3	4	5
17. Damaging property	1	2	3	4	5
18. Whistle-blowing or telling others about your negative behavior	1	2	3	4	5
19. Belittling your opinions in front of others	1	2	3	4	5
20. Giving you the "silent treatment"	1	2	3	4	5
21. Displaying, using, or distributing sexist or suggestive materials	1	2	3	4	5
22. Making offensive sexist remarks	1	2	3	4	5
23. Repeatedly telling sexual stories or jokes that were offensive to you	1	2	3	4	5
24. Making offensive remarks about your appearance, body, or sexual activities	1	2	3	4	5
25. Making unwanted attempts to establish a romantic sexual relationship with you despite your efforts to discourage him or her	1	2	3	4	5
26. Touching you in a way that made you feel uncomfortable	1	2	3	4	5
27. Have you experienced interpersonal aggression at work from your supervisor?	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

<i>Please respond to the following questions about your workload in your current job.</i>	Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1. How often does your job require you to work very fast?	1	2	3	4	5
2. How often does your job require you to work very hard?	1	2	3	4	5
3. How often does your job leave you with little time to get things done?	1	2	3	4	5
4. How often is there a great deal to be done?	1	2	3	4	5
5. How often do you have to do more work than you can do well?	1	2	3	4	5

INSTRUCTIONS: The following items ask you to estimate how often YOUR COWORKER(S) at your current job have engaged in the following behaviors and YOU were the TARGET. Items should be endorsed only when YOU were the TARGET of the behavior. Please circle ONE response for each of these questions.

<i>How often has a current COWORKER or COWORKERS engaged in this behavior and YOU were the target?</i>	Never	1 or 2 Times A Year	3 or 4 Times A Year	About Once A Month	Once A Week or More
1. Making angry gestures (e.g., pounding fist, rolling eyes)	1	2	3	4	5
2. Avoiding you	1	2	3	4	5
3. Making you look bad	1	2	3	4	5
4. Yelling or raising their voice	1	2	3	4	5
5. Withholding information from you	1	2	3	4	5
6. Sabotaging your work	1	2	3	4	5
7. Swearing at you	1	2	3	4	5
8. Withholding resources (e.g., supplies, equipment) needed to do your job	1	2	3	4	5
9. Physically assaulting you	1	2	3	4	5
10. Using hostile body language	1	2	3	4	5
11. Insulting or criticizing you (including sarcasm)	1	2	3	4	5
12. Failing to correct false information about you	1	2	3	4	5
13. Interrupting or "cutting you off" while speaking	1	2	3	4	5
14. Getting "in your face"	1	2	3	4	5
15. Spreading rumors	1	2	3	4	5
16. Making threats	1	2	3	4	5
17. Damaging property	1	2	3	4	5
18. Whistle-blowing or telling others about your negative behavior	1	2	3	4	5
19. Belittling your opinions in front of others	1	2	3	4	5
20. Giving you the "silent treatment"	1	2	3	4	5
21. Displaying, using, or distributing sexist or suggestive materials	1	2	3	4	5
22. Making offensive sexist remarks	1	2	3	4	5
23. Repeatedly telling sexual stories or jokes that were offensive to you	1	2	3	4	5
24. Making offensive remarks about your appearance, body, or sexual activities	1	2	3	4	5
25. Making unwanted attempts to establish a romantic sexual relationship with you despite your efforts to discourage him or her	1	2	3	4	5
26. Touching you in a way that made you feel uncomfortable	1	2	3	4	5
27. Have you experienced interpersonal aggression at work from a coworker or coworkers?	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

<i>How often do the following events occur in your present job?</i>	Never	Once or Twice	Once or Twice per Month	Once or Twice per Week	Every Day
1. How often does someone tell you <i>what</i> you are to do?	1	2	3	4	5
2. How often does someone tell you <i>when</i> you are to do your work?	1	2	3	4	5
3. How often does someone tell you <i>how</i> you are to do your work?	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

<i>In your present job, how often do you have to ask permission...</i>		Never	Rarely	Sometimes	Quite Often	Extremely Often or Always
1.	to take a rest break?	1	2	3	4	5
2.	to take a lunch/meal break?	1	2	3	4	5
3.	to leave early for the day?	1	2	3	4	5
4.	to change the hours you work?	1	2	3	4	5
5.	to leave your office or workstation?	1	2	3	4	5
6.	to come late to work?	1	2	3	4	5
7.	to take time off?	1	2	3	4	5
<i>How often...</i>						
8.	are you required to work closely with your supervisor?	1	2	3	4	5
9.	are you required to work closely with other coworkers?	1	2	3	4	5
10.	do you have the flexibility to choose the coworkers with whom you interact?	1	2	3	4	5
11.	can you have privacy at work when you want it?	1	2	3	4	5

INSTRUCTIONS: When answering the following questions, first think about rewards that you have received as an employee of your current employer (for example, pay, promotions, recognition). Next, think about the procedures that were used to arrive at these rewards. Read each statement, choose your response to the right of the question, and circle it.

<i>With regard to <u>rewards</u>, to what extent...</i>		To a Very Small Extent	To a Small Extent	Somewhat	To a Large Extent	To a Very Large Extent
1.	Do your rewards reflect the effort you have put into your work?	1	2	3	4	5
2.	Are your rewards appropriate for the work you have completed?	1	2	3	4	5
3.	Do your rewards reflect what you have contributed to the organization?	1	2	3	4	5
4.	Are your rewards justified, given your performance?	1	2	3	4	5
<i>With regard to <u>procedures</u>, to what extent...</i>						
5.	Have you been able to express your views and feelings during those procedures?	1	2	3	4	5
6.	Have you had influence over the rewards arrived at by those procedures?	1	2	3	4	5
7.	Have those procedures been applied consistently?	1	2	3	4	5
8.	Have those procedures been free of bias?	1	2	3	4	5
9.	Have those procedures been based on accurate information?	1	2	3	4	5
10.	Have you been able to appeal the outcome arrived at by those procedures?	1	2	3	4	5
11.	Have those procedures upheld ethical and moral standards?	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it

<i>How often do you find it difficult or impossible to do your current job because of _____ ?</i>		Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1.	Poor equipment or supplies	1	2	3	4	5
2.	Organizational rules and procedures	1	2	3	4	5
3.	Other employees	1	2	3	4	5
4.	Your supervisor	1	2	3	4	5
5.	Lack of equipment or supplies	1	2	3	4	5
6.	Inadequate training	1	2	3	4	5
7.	Interruptions by other people	1	2	3	4	5
8.	Lack of necessary information about what to do or how to do it	1	2	3	4	5
9.	Conflicting job demands	1	2	3	4	5
10.	Inadequate help from others	1	2	3	4	5
11.	Incorrect instructions	1	2	3	4	5

INSTRUCTIONS: When responding to the questions below, think about how you feel in general, across most situations. Then, choose your response to the right of the question, and circle it.

<i>How often do you <u>generally</u> feel ____ ?</i>		Very Slightly or Not At All	A Little	Moderately	Quite a Bit	Extremely Frequently
1.	How often do you generally feel <i>angry</i> ?	1	2	3	4	5
2.	How often do you generally feel <i>irritable</i> ?	1	2	3	4	5
3.	How often do you generally feel <i>hostile</i> ?	1	2	3	4	5
4.	How often do you generally feel <i>scornful</i> ?	1	2	3	4	5
5.	How often do you generally feel <i>disgusted</i> ?	1	2	3	4	5
6.	How often do you generally feel <i>loathing</i> ?	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, please choose the rating scale below to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex you are, and roughly the same age. Please select your response to the right of the question, and circle it

		Very Inaccurate	Moderately Inaccurate	Neither Inaccurate nor Accurate	Moderately Accurate	Very Accurate
1.	I am relaxed most of the time.	1	2	3	4	5
2.	I get stressed out easily.	1	2	3	4	5
3.	I worry about things.	1	2	3	4	5
4.	I change my mood a lot.	1	2	3	4	5
5.	I often feel blue.	1	2	3	4	5
6.	I get irritated easily.	1	2	3	4	5
7.	I am easily disturbed.	1	2	3	4	5
8.	I get upset frequently.	1	2	3	4	5
9.	I seldom feel blue.	1	2	3	4	5
10.	I have frequent mood swings.	1	2	3	4	5

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question, and circle it.

1. How often do you think about quitting your job?	Never	Seldom	Sometimes	Often	Constantly
2. How likely is it that you will quit your job in the next several months?	Very Unlikely	Unlikely	Neither Likely nor Unlikely	Likely	Very Likely
3. How likely is that you will explore other job opportunities in the next several months?	Very Unlikely	Unlikely	Neither Likely nor Unlikely	Likely	Very Likely
4. All things considered, how desirable is it for you to quit your job?	Very Undesirable	Undesirable	Neutral	Desirable	Very Desirable
5. If I were to quit my job, I could find another job that is just as good.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
6. I would have no problem finding an acceptable job if I quit.	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

INSTRUCTIONS: Read each question below carefully. Then, choose your response to the right of the question and circle it.

	True	False
1. It is sometimes hard for me to go on with my work if I am not encouraged.	T	F
2. I sometimes feel resentful when I don't get my way.	T	F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	T	F
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.	T	F
5. No matter who I'm talking to, I'm always a good listener.	T	F
6. There have been occasions when I took advantage of someone.	T	F
7. I'm always willing to admit it when I make a mistake.	T	F
8. I sometimes try to get even rather than forgive and forget.	T	F
9. I am always courteous, even to people who are disagreeable.	T	F
10. I have never been irked when people expressed ideas very different from my own.	T	F
11. There have been times when I was quite jealous of the good fortune of others.	T	F
12. I am sometimes irritated by people who ask favors of me.	T	F
13. I have never deliberately said something that hurt someone's feelings.	T	F

INSTRUCTIONS: Please answer the following questions about your job.

- Are you employed full time? ____ Yes ____ No (please check one)
- How many hours per week do you typically work? _____ hours per week
- How long have you been employed by the organization where you work? _____ years and _____ months
- How long have you been employed in your current job? _____ years and _____ months
- How long have you been working under your current supervisor? _____ years and _____ months
 - What is your current supervisor's gender? (please check one) ____ Female ____ Male
- How long have you been working with most of the co-workers in your current work group/unit? _____ years and _____ months

INSTRUCTIONS: Please answer the following questions about yourself.

1. What is your gender? Female Male (please check one)
2. Which of the following **BEST** describes your racial background? (please check one)
 African American Biracial (please specify) _____
 Asian American International (please specify) _____
 Caucasian Other (please specify) _____
 Hispanic
 Native American
3. What is your age? _____
4. What is the **highest** level of education that you have completed? (please check one)
 Have not completed high school Bachelor's degree or equivalent
 High school diploma or equivalent Master's degree or equivalent
 Some college, but no degree Doctoral degree or equivalent
 Two-year college degree or equivalent
5. In your opinion, what was your socio-economic class **when you were growing up**? (please check one):
 Lower Middle Upper
6. Is English the **first** language that you learned as a child? (please check one)
 Yes No
7. In what industry do you work? (please check one)
 Architecture & Engineering Legal
 Building & Grounds Maintenance Life, Physical, & Social Science
 Business & Financial Operations Management
 Community & Social Services Military
 Computer & Mathematical Office & Administrative Support
 Construction & Extraction Personal Care & Service
 Education, Training, & Library Production
 Farming, Fishing, & Forestry Protective Service
 Food Preparation & Service Related Sales & Related
 Healthcare Student
 Installation, Maintenance, & Repair Transportation & Material Moving
 Other (please specify): _____
8. Approximately how large is the organization where you currently work? (please check your best estimate)
 50 employees or less 5,001 to 10,000 employees
 51 to 100 employees 10,001 to 50,000 employees
 101 to 500 employees 50,001 to 100,000 employees
 501 to 1,000 employees 100,001 or more employees
 1,001 to 5,000 employees

**Thank you very much for taking the time to help with this research!
Please return this survey to the survey administrator.**

FOOTNOTES

1. Buss (1961) did not differentiate between physical behaviors and non-verbal communication behaviors. If a behavior is enacted through some physical action (e.g., gestures, facial expressions), it is considered to be a physical behavior. Only those aggressive acts that are actually communicated with words are considered to be verbal.

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