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An Examination of Workplace Aggression, Job Performance, and Flow-States

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

AN EXAMINATION OF WORKPLACE AGGRESSION, JOB PERFORMANCE, AND
FLOW-STATES

A dissertation submitted in partial fulfillment

of the requirements of the degree of

DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

John P. Sayn-Wittgenstein

2016

To: Dean Michael R. Heithaus
College of Arts, Sciences, and Education

This dissertation, written by John P. Sayn-Wittgenstein, and entitled An Examination Of Workplace Aggression, Job Performance, and Flow-States, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Date of Defense: April 1, 2016

The dissertation of John P. Sayn-Wittgenstein is approved.

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Florida International University, 2016

DEDICATION

Richard P Wittgenstein & Jerriann Sullivan

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ABSTRACT OF THE DISSERTATION

AN EXAMINATION OF WORKPLACE AGGRESSION, JOB PERFORMANCE, AND
FLOW-STATES

by

John P. Sayn-Wittgenstein

Florida International University, 2016

Miami, Florida

Professor Valentina Bruk-Lee, Major Professor

This dissertation addresses both the terminological diversity problem raised in the workplace aggression literature and the mechanism by which workplace aggression may impact job performance in a series of studies. In addressing the first question, the factor structure of incivility, interpersonal conflict, bullying, abusive supervision, and social undermining was investigated using a single factor model and a second order model. . Data was collected across two studies consisting of samples of 410 students and 247 working adults, respectively. The results indicated relatively better fit for the second order model, showing all of the workplace aggression constructs items loading on their original construct. The unique variance contributed by workplace aggression constructs was also tested in study two using self-rated performance ratings and the experience of flow-states. The results indicated that there were no tangible differences in the variance explained between the five aggression construct. Together, these findings suggest that there is a terminological diversity problem in the workplace aggression literature as each construct may be tapping into the same latent workplace aggression variable. Further, the

indirect effect of workplace aggression through the experience of flow states was supported using multi-wave data. This dissertation highlight the current state of the literature, supporting our understanding that the experience of workplace aggression is both detrimental to work related performance and impacts the mechanisms individuals use in engaging with the world around them.

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CHAPTER I: INTRODUCTION

Workplace aggression has been a topic of interest since the early days of industrial organizational psychology (e.g., Boulding, 1963; Guetzkow & Gry, 1954; Kahn & Boulding, 1964), beginning in earnest in the first half of the 20th century. As our understanding of workplace aggression grew, research examining its impact on the well-being, health, and safety of workers grew as well, becoming a major topic of interests within the psychological community. However, it was not until recent times that the national agencies like the CDC (the Centers for Disease Control) and NIOSH (the National Institute of Occupational Safety and Health) made workplace aggression a topic of focus. The NIOSH and CDC (2004) view the workplace and aggression through its typology, which categorizes it across four distinct types of interaction. Type I refers to criminal intent or to those with no legitimate relationship to the business or its employee (e.g., robbery, shoplifting and trespassing). Type II refers to customer or client hostility and generally occurs when the perpetrator has a legitimate relationship with the business. Type III is defined by aggression or violence that occurs between employees (e.g., threats or attacks by an employee towards another employee). Type IV refers to aggressive or violent acts by a perpetrator who does not have a relationship with the business or organization but does have a relationship with the victim. Although all of the aforementioned types are topics of interest within the occupational health psychology (OHP) community, the present dissertation will focus solely on the aggression portion of Type III (hereinafter referred to as workplace aggression). The purpose of not including physical violence in the scope of this dissertation is twofold. First is that workplace

violence, unlike workplace aggression, has a much broader and scope of impact, ranging from threats of violence to physical assaults and even homicide. Workplace aggression at its most extreme falls short of reaching a physical confrontation. The second reason that there are currently a number of state and federal laws aimed at addressing and preventing workplace violence. These laws require employers to make reasonable efforts to provide a safe workplace and are evaluated and enforced by the federal Occupational Safety and Health Administration (OSHA). For workplace aggression, the prevalence and number of laws are few, with only three states in the U.S. having workplace aggression specific laws currently in place (California, Tennessee, and Utah).

The OHP literature has defined general workplace aggression as behaviors involving “efforts by individuals to harm others at work, or the organizations in which this work occurs” (Nueman & Baron, 2005; p. 13). In the past 20 years, there has been a groundswell in the breadth and scope of workplace aggression research. The increased research has led to a number of revelations demonstrating the impact of workplace aggression. Findings show workplace aggression to be the most frequently experienced type of mistreatment in the workplace (Goldberg & Grandey, 2007; Von Dierendonck & Mevissen, 2002), with studies reporting that between 71% and 96% of employees have experienced aggression (Cortina, Magley, Williams, & Langhout, 2001; Porath & Pearson, 2010). The effects of workplace aggression are not limited to the individuals engaged or experiencing the aggression. Farkas and Johnson (2002) reported that 62% of individuals who witnessed an act of workplace aggression reported being bothered or

feeling uncomfortable while 52% reported dwelling over the workplace aggression interaction they witnessed.

Research on the effects of workplace aggression has been prolific, showing it to be negatively related to job satisfaction (Frone, 2000; Harvey, Blouin, & Stout, 2006), performance (Jehn et al., 2001), team productivity (Van Vainen & De Dreu, 2001; Jehn, 1995), commitment (Frone, 2000; Lankau et al, 2007), well-being (Lazuras, Rodafinos, Matsiggos, & Stamatoulakis, 2009; Bowling & Eschleman, 2010), time loss and slowdown (Skarlicke & Folger, 1997; Pearson, Andersson & Porath, 2000), and supervisor misbehavior (Hornstein, 1996). Furthermore, workplace aggression has been positively linked to a host of negative outcomes such as turnover (Liu, Spector, & Shi, 2008; Bayazit, & Mannix 2003; Jehn, Northcraft, & Neale, 1999), counterproductive work behaviors (Penney & Spector, 2005), burnout (Giebels & Janssen, 2005; Harvey et al, 2006; Dijkstra, De Dreu, Evers, van Dierendonck, 2009) and depression (e.g., Frone, 1998, 2000). The impact of workplace aggression on the workforce reported that the cost of a severe case of workplace aggression can cost an organization up to \$24,000 per employee because of losses in productivity, absence, medical costs, and turnover (Giga, Hoel, & Lewis, 2008; Sheehan, McCarthy, Barker, & Henderson, 2001; Tepper, Duffy, Henle, & Lambert, 2006; Yeung & Griffin, 2008).

As research into workplace aggression and its impact grew, so did the number of constructs used to investigate it. These included but are not limited to abuse, abusive supervision, supervisor abuse, aggression, bullying, harassment, incivility, interpersonal conflict, mistreatment, mobbing, petty tyranny, and social undermining (e.g., Bowling &

Beehr, 2006). Of these constructs, research has predominantly focused on five-workplace aggression constructs: incivility, interpersonal conflict, abusive supervisor, bullying, and social undermining (Hershcovis, 2011). However, occupational health researchers have expressed concerns regarding the level of definitional and statistical overlap these constructs share. The overlap has become colloquially known among scholars as the terminological diversity problem (Bies & Tripp, 2005; Wang, Sinclair & Tetrick, 2012).

The terminological diversity problem

The terminological diversity problem, which can arise from the creation of a number of highly similar or identical constructs, occurs when relevant historical knowledge of the subject matter is absent or goes unconsidered (Block, 1995). The lack of proper historical context of the research can waste time, resources, and energy as it leads researchers to rediscover the same basic phenomena ad nauseam (the old wine in a new bottle problem). The identification of a possible terminological diversity problem within the workplace aggression literature spurred on statements of concern and calls for action by Bowling and Beehr (2006), Neuman and Baron (2005), Raver and Barling (2008), and Hershcovis and Barling (2010). These calls identified construct fragmentation as a key issue in the advancement of the workplace aggression literature and called on the OHP community to address these concerns (Barclay & Aquino, 2011; Wang, Sinclair & Tetrick, 2012).

In response, Hershcovis (2011) conducted a meta-analysis that highlighted the distinguishing characteristics between the workplace aggression constructs and their shared definitional overlap. The results suggested that overlap between some of the

constructs does exist. However, Hershcovis concluded that while there were similarities between the constructs, the differences between them were varied and statistically significant. These findings highlighted the need for researchers to examine the constructs in context with one another. Wang, Sinclair, and Tetrick (2012) furthered this rhetoric, calling upon the OHP field to move past a definitional examination and present evidence of the structural distinctiveness between the workplace aggression constructs. Specifically, they urged researchers to focus on two areas, emphasizing the importance of demonstrating further construct validity and incremental predictive validity between the workplace aggression constructs. Thus, before discussing these constructs within the context of the terminological diversity problem, it is imperative to understand and define what they are.

Defining the workplace aggression constructs

Incivility

Andersson and Pearson (1999) defined incivility as “low-intensity deviant behavior with ambiguous intent to harm the target in violation of workplace norms for mutual respect” (pg. 457). There are two key components that are key to understanding incivility (e.g., Andersson & Pearson, 1999; Hershcovis, 2011). The first is its focus on low-intensity behavior. However, low intensity does not mean low impact, as research has shown low-intensity forms of mistreatment to have a significant impact on employee and organizational outcomes and attitudes (e.g., Hershcovis, 2011). The second component is the ambiguous intent of the uncivil act. As Lim and Cortina (2005) stated “incivility differs from psychological aggression when behaviors lack clear

intentionality...it can often be attributed to other factors, such as the instigator's ignorance, oversight, or personality; intent, whether present or not, is ambiguous to one or more of the parties involved" (pp. 483 – 484).

Interpersonal conflict

Interpersonal conflict is defined as an interaction involving disagreement or incompatibilities between employees in relation to personal or workplace activities, duties, functions, tasks, or opinions (e.g., Boulding, 1963; Guetzkow & Gry, 1954; Jehn, 1995; Spector & Jex, 1998). Interpersonal conflict may be broken down into two types, task and relationship conflict (Jehn, 1995). Task conflict is defined as "disagreements among group members about the content of the tasks being performed, including differences in viewpoints, ideas, and opinions" (p. 258), while relationship conflict is defined as the "interpersonal incompatibilities among group members, which typically includes tension, animosity, and annoyance among members within a group" (p. 258). Examples of these conflict types may be a disagreement over the proper steps needed to complete a work task (task conflict) or a disagreement about a personal or political opinion in the workplace (relationship conflict).

Abusive supervision

Tepper (2000) defined abusive supervision as "sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (p. 178), and said it is manifested through behaviors such as hostility, public criticisms, temper tantrums, inconsiderate actions, rudeness, and coercion (Ashforth, 1994; Bies, 2000; Bies & Tripp, 1998; Neuman & Baron, 1997). Abusive supervision is unique when compared to other

workplace aggression constructs for three reasons. The first reason is that it does not include physical acts under its definition, as it was conceptualized as non-physical abuse (Tepper, 2000). The second reason is that the behavior is sustained, meaning that an experience or two of abuse from a supervisor does not constitute abusive supervision. The third reason is that abusive supervision is the only form of workplace aggression that directly names the perpetrator in its definition.

Bullying

Bullying is defined as repeated instances in which an employee is exposed to negative acts, such as abuse (both physical and verbal), offensive statements, ridicule, or harassment from a third party (Einarsen, 2000). Unlike other forms of workplace aggression (such as abusive supervision), the perpetrator of workplace bullying can come from any member of the organization (e.g., co-worker, supervisor, subordinate). For clarification, this removes customer-driven bullying from the scope of workplace bullying (Hershcovis, 2011). Bullying clearly emphasizes that its aggressive behaviors are sustained, persistent, and at times even systematic. Bullying research has shown a trend of power imbalance between the victim and the perpetrator, suggesting that bullying may be more prevalent when the perpetrator is in a position of power over the victim (Matthiesen & Einarsen, 2001; Mikkelsen & Einarsen, 2001). However, these findings are currently being debated, as research has shown victims of bullying to report that they did not consider power differences as a defining characteristic of their bullying experience (Benson, 2013; Saunders, Huynh, & Goodman-Delahunty, 2001). Finally, it should be noted that while workplace bullying does include one example of physical

abuse (e.g., violence), it makes no differentiation between threats of violence and actual physical violence, nor does it differentiate between the nature of the violence or the type of the violence experienced.

Social Undermining

Social undermining is defined as “behavior intended to hinder, over time, the ability to establish and maintain positive interpersonal relationships, work-related success, and favorable reputation” (Duffy, Ganster, & Pagon, 2002; p. 332) and focuses on how perpetrators can harm or damage the victim’s relationships and hinder their successes (e.g. Hershcovis, 2011). There are three key components crucial to understanding social undermining and its place within the workplace aggression literature (Duffy et al., 2002; Hershcovis, 2011). The first is that social undermining behavior is deliberate, with the intent being present within the perpetrator. The second component is the perpetrator’s belief that the undermining acts will produce certain outcomes involving negative effects on the victim’s reputation, interpersonal relationships, and work-related successes. The third component is that social undermining can affect those outside of the perpetrator and victim relationship as a goal of social undermining is to influence the attitudes and behaviors of those surrounding the victim.

Purpose of the Dissertation

This dissertation consists of two studies designed to clarify the terminological diversity problem across the incivility, interpersonal conflict, abusive supervision, bullying, and social undermining constructs. This dissertation’s design followed the recommendations made by Wang, Sinclair, and Tetrick (2012). Specifically, study one

focused on investigating the construct validity between the five constructs, while study two focused on assessing the incremental predictive validity between the workplace aggression constructs.

Study One

Study one focused on the construct validity between the five constructs and investigated the factor structure of the constructs through a single factor model and a higher-order model of the constructs. Given that these constructs have been defined, study one focused on the arguments contrasting and comparing the workplace aggression constructs similarities and differences as they are currently conceptualized and understood.

Study Two

Study two focused on the investigation of the incremental validity of incivility, interpersonal conflict, abusive supervision, bullying, and social undermining in predicting job performance. Job performance has been one of the most thoroughly researched outcomes within the field of industrial and organizational psychology, with some going as far as calling it the ultimate criterion (Thorndike, 1949). However, within the workplace aggression literature, there has been a distinct absence of research in regards to the effects of workplace aggression on individual job performance. Study two addressed the gap in the literature by directly examining the impact of workplace aggression on individual job performance.

In addition, study two examined the impact workplace aggression has on the job performance process through its influence on the experience of work related flow-states.

Flow-states create the conditions that immerse an individual in their work, allowing them to become fully engrossed in their task. Flow-states are considered to be the ‘optimal experience’ at work (e.g., Bakker, 2008). The experiences of flow-states at work have been shown to be directly related to higher levels of both individual and team performance levels (e.g., Bakker, Demerouti & Euwema, 2005; Demerouti, 2006; Engeser & Rheinberg, 2008; Landhäußer & Keller, 2012). However, to date, there has been no research examining the relationship between workplace aggression and the experience of flow-state in the workplace.

CHAPTER II: LITERATURE REVIEW

Study One

Similarities and differences between workplace aggression constructs

Calls to address the terminological diversity problem in the workplace aggression literature stem from concerns that a number of workplace aggression constructs may be too similar in nature and thereby capturing many of the same instances of workplace aggression. To properly understand these concerns it is critical to review the similarities and differences between the five constructs from a conceptual (examining both the definitional and theoretical aspects of the construct) and empirical perspective (item overlap and statistical overlap/multicollinearity).

Conceptual Perspective

One of the most established taxonomies used in understanding aggression is Buss's (1961) aggression typology, which differentiates aggression across three dichotomies: the direct / indirect, the active / passive, and the physical / verbal. While the distinctions between physical and verbal aggression are clear, the other two dichotomies need to be clarified. Direct forms of aggression encompass harm being committed directly by the perpetrator on the victim; while indirect forms see the perpetrator targeting something of value to the victim, but not the victim themselves (e.g., a protégé or professional colleague). Active aggression requires the perpetrator to engage in an action that directs harm at their target, where passive aggression involves the perpetrator withholding things the victim needs (e.g., resources, knowledge, materials, etc.).

However, none of the five workplace aggression constructs fall neatly into a single type across these dichotomies. Thus, previous attempts to contrast and compare the theoretical and definitional similarities across workplace aggression constructs have organized them through similarities derived from an interpretation of the literature (e.g., Neuman & Baron, 2005).

Neuman and Baron (2005) argued that the bullying, abusive supervision, social undermining, incivility, and interpersonal conflict differentiate themselves from one another (and other workplace aggression constructs) through their focus on unique manifestations of workplace aggression. Specifically, each of the five workplace aggression constructs is designed to capture a unique element of the workplace aggression experienced. Thus, bullying is defined through its goal-directed nature (i.e., that it is intentional), its persistence, and an underlying notion of intent to cause harm by the perpetrator. Of the five constructs, bullying alone acknowledges the possibility of physical violence and investigates the presence of physical abuse or the threat of physical abuse as a component of workplace aggression (Einarsen & Rakes, 1997). Abusive supervision is unique as it focuses solely on workplace aggression perpetrated by those in a supervision role, going so far as to preface every item on the scale with the phrase “my boss” (Tepper, 2000). Like bullying, a key element of abusive supervision is the persistent nature of the negative and aggressive behaviors. However, the manner in which it is manifested is different from bullying, as can be seen not only in whom the perpetrator is but also in regards to the scope of workplace aggression behaviors they investigate (e.g., bullying includes violent behavior within its scope of investigation). The

distinctive feature of social undermining is that it is focused on hindering work-related success by damaging the victim's relationships, reputation, and opportunities for success in a targeted, malicious, and hidden manner (Duffy, Ganster, & Pagon, 2002). Social undermining is defined by the insidious intent of its perpetrator towards the victim, regardless of the victim's awareness of the aggressive act. Social undermining progresses much slower, making it less obvious to its victims at first but not less impactful in its effects (e.g., Nueman & Baron, 2005). Incivility and interpersonal conflict are different from the other workplace aggression constructs, as they generally do not violate standard workplace operating procedures or the official standards of workplace conduct. Both of these workplace aggression constructs place an emphasis on the experience of rude or disrespectful treatment and the violation of the established informal social and workplace norms that govern workplace interactions. Incivility distinguishes itself through its ambiguous nature. Specifically, incivility is defined by the fact that the intent to harm, as interpreted by the perpetrator, the victim, and by any witnesses, is ambiguous (Andersson & Pearson, 1999). The ambiguous nature of the intent of the interaction differentiates it from all other workplace aggression constructs. Finally, interpersonal conflict is defined by its direct reference assessment of conflict involving the interaction of the individual and anyone in their entire work unit, making no assumptions about established relationships (e.g., peer-to-peer, supervisor-to-subordinate, or subordinate-to-supervisor; Jehn, 1995). Interpersonal conflict focuses on violations of non-written or unofficial expectations of workplace behaviors. Specifically, interpersonal conflict focuses on the negative outcomes that occur when individuals perceive incompatibilities or perceptions between themselves and another party. These incompatibilities or disagreements can then

lead to either (or both) party believing that they have interpersonal incompatibilities or hold conflicting points of view.

Empirical Perspective

A simple review of the five workplace aggression constructs scales reveals that there are a number of similarities between the individual items in the scales. The overlap across the constructs serves as a key concern in the terminological diversity discussion (Wang, Sinclair, & Tetrick, 2012). Item overlap occurs in three ways (e.g., Burns, 2000). The first is that the different scales have identical items, the second is that one item on a scale may be represented by a number of items on another scale, and third that the items are phrased in such an ambiguous nature that they can resemble one another. As can be seen in Table 1, a number of trends exist across the five workplace aggression constructs. Each construct contains items that overlap with at least two of the other four constructs, with items “relating to the experience of being doubted” or “having your judgment questioned” being present in each construct. Given that each scale is thought to provide unique information on the experience of workplace aggression, the purpose of the scales may be diminished because of their item overlap, as item overlap can cause issues in a number of ways (Fields, 2010). In the statistical sense, scales with significant item overlap can suffer from multicollinearity and violate statistical assumptions regarding independence and variables. Similar measures can increase the standard errors in the beta (*b*) coefficient. Specifically, if both measures are accounting for the same variance in an outcome of interest, then the second variable is adding very little unique variance of its own. Both of these issues can be further exacerbated, as it can be difficult to parse out

which of the overlapping variables is more important, clouding the researcher's ability to make meaningful distinctions between the two constructs' true effects.

Although empirical evidence specifically examining item overlap in the workplace aggression constructs is limited, existing research suggests that there are significant statistical differences between the constructs. Benson (2013) examined the factor structure and item overlap in bullying, social undermining, and abusive supervision using confirmatory factor analysis techniques. The results showed support for a second-order factor model, with each construct loading independently and rejected a single factor model comprised of all three constructs. These findings demonstrated that while bullying, social undermining, and abusive supervision do share variance, they were not so similar as to load on a single factor under the higher-order aggression construct. Benson's model showed that the constructs do have some overlap, as represented by the higher order construct. However, each construct was unique enough to necessitate its own factor, demonstrating that while related, each construct should account for a significant portion of the non-shared variance.

Benson (2013) also showed bullying, social undermining, and abusive supervision influenced workplace and individual outcomes in different manners. Bullying, social undermining, and abusive supervision all reported statically equivalent effect sizes in relation to job-related attitudes and burnout. However, after controlling for negative affect and organizational constraints, social undermining became a non-significant predictor of both the job-related attitudes and burnout outcomes, while bullying only remained significant as a predictor of supervisor satisfaction. These findings suggest that

workplace aggression constructs respond differently to mediating and moderating variables and adds utility to the existence of these constructs.

Shifting focus from a factor analysis perspective to a correlational one, three studies have examined at least two of the five workplace aggression constructs in relation to one another. Currently, a correlation above 0.70 is considered the cutoff mark for multicollinearity (Lehmann, Gupta, & Steckle; 1988). Nixon (2011) reported correlations for each of the five workplace aggression constructs and found six of the fourteen correlations exceeded the .7 correlation cutoff point. Of those six correlations that were above .70, bullying accounted for four of them, overlapping with incivility, undermining (supervisor and coworker), and abusive supervision. Two other studies have examined the correlational relationship between interpersonal conflict and incivility, Penney and Spector (2005) reported a correlation of $r = .49$ ($p < .01$) while Wittgenstein (2014) reported correlations of $r = .68$ ($p < .01$) with relationship conflict and $r = .66$ ($p < .01$) with task conflict, both of which are interpersonal conflict subscales.

As proposed by Wang, Sinclair, and Tetrick (2012), a key to understanding the distinctiveness between the various workplace aggressions constructs is a firm understanding of the construct validity between constructs. While there is cause for concern over a terminological diversity problem from definitional, conceptual, and item overlap perspective, the current limited empirical evidence does not support this notion. Given that additional empirical research is needed, the following research question is proposed:

Research Question 1: In light of the terminological diversity problem, what is a better representation of the factor structure of the five workplace aggression constructs

in relation to one another: a single factor model comprised of incivility, interpersonal conflict, abusive supervision, undermining, and bullying (Figure 1) or a five-factor model of incivility, interpersonal conflict, abusive supervision, undermining, and bullying with a higher-order aggression construct (Figure 2)?

Study Two

To address the distinctiveness between the various workplace aggression constructs, one must examine each construct's unique variance, or in other words, their incremental validity (Wang, Sinclair & Tetrick; 2012). Incremental validity refers to "the degree to which a construct (or variable) significantly adds unique variance to the prediction of some construct or criterion above and beyond what is predicted by some other measure" (Lounsbury, Gibson, & Saudargas, 2006, p. 139). Given that study one addressed the structural distinctiveness between the five workplace aggression constructs, the aim of study two will be to evaluate the incremental predictive validity of the five workplace aggression constructs on job performance.

The workplace aggression and job performance relationship

Job performance has always been an outcome of interest within the workplace literature, so much so that scholars such as Thorndike (1949) declared job performance to be "the ultimate criterion" (p. 121). The workplace aggression literature on job performance is limited, in both general aggression and specific aggression construct analyses. To understand how the workplace aggression and job performance relationship operates, it is crucial to understand how workplace aggression and job performance interact. For this, the present study utilizes the conservation of resources theory (Hobfoll,

1989) and the job-demand resource model (Bakker & Demerouti, 2007) to frame the interaction between workplace aggression and job performance.

The conservation of resources theory (COR; Hobfoll, 1989; Hobfoll & Freedy, 1993) states that within the workplace, “resources are objects, personality characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, or energies” (Hobfoll, 1989 p. 516). Individuals will seek to build, retain, and protect their resources, as they understand that the resources are limited. Environmental stressors such as workplace aggression deplete the resources and their reserves. In the COR, workplace aggression acts as demands, which are factors associated with mental, physical, or physiological costs of the job (Ito & Brotheridge, 2012; Maslach, Jackson & Leiter, 1986; Medina, Munduate, Dorado, Martinez, & Guerra, 2005). The impact of workplace aggression as a demand is exacerbated as individuals view the expenditure of resources as strains when applied towards tasks deemed unnecessary or where the outcomes are uncertain (Boswell, Olson-Buchanan, & LePine, 2004; Hobfoll, 1989; Hobfoll & Freedy, 1993; LePine, Podsakoff, & LePine, 2005). Using this framework, COR has a history of serving as a blueprint for understanding how workplace aggression can affect the work-related outcomes, such as job performance (e.g., Harris, Kacmar & Zivnuska, 2007; Lee & Brothridge, 2007; Oore, LeBlanc, Day, Leiter, Laschinger, Price & Latimer; 2010; Wheeler, Halbesleben & Shanine, 2010).

Hobfoll (1989) outlined how COR identifies the four paths that workplace aggression can take in negatively affecting job performance. These include when the

individual perceives a threat to their resources when they experience a loss in resources, when they perceive their work demands or responsibilities to exceed their resources, or when invested resources fall short of expected returns (Hobfoll, 2001; Hochwarter, Witt, Treadway, & Ferris, 2006). Under these guidelines, researchers have argued that workplace aggression creates and promotes any or even all of these conditions (Oore, LeBlanc, Day, Leiter, Laschinger, Price & Latimer; 2010). Specifically, COR states that workplace aggression will negatively affect an individual's ability to complete their goals and thereby hinder performance.

Drawing from COR, the job demand – resources model (JDR) states that job resources play a critical component in employee motivation (e.g., Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Hackman & Oldham, 1980; Makikangas, Bakker, Aunola, & Demerouti, 2010). Hackman and Oldham demonstrated that job resources could facilitate a number of important job-related functions including holding the employee responsible for their work processes and outcomes, providing motivational reinforcement through perceived value, and providing information and feedback on the employee's work activities. Central to the JDR model is the assumption that every job comes with its own inherent job resources and job demands (Bakker & Demerouti, 2007). As with COR, the JDR model views resources as the components of the job that may be called upon to aid in completing work goals, furthering personal development, or in reducing the level of physiological and psychological strains suffered from workplace stressors (Bakker & Demeroud, 2007; Bakker, Demeroud, & Euwema, 2005; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Salanova, Bakker & Llorens,

2006; Van der Heijden & Bakker, 2011). Furthermore, job resources are used by the individual to help in the reduction of the effects of job demands (Bakker & Demerouti, 2007). Job demands are the physical, psychological, social, or organizational components of the job needed to sustain the work effort and include, but are not limited to, high-pressure work situations, unfavorable work environments, and emotionally demanding interactions with coworkers, supervisors, or clients. Research using the JDR model as a framework has shown workplace aggression to act as a job demand, due to the emotionally stressful situations it places the individual in (Bakker, Demerouti, & Verbeke, 2004; Ilies, Johnson, Judge, & Keeney, 2011; Peeters, Montgomery, Bakker, & Schaufeli, 2005). As with COR, the JDR model has a tradition of use in framing how and why workplace aggression can influence individual and organizational outcomes (e.g., De Cuyper, Bailien & De Witte, 2009; Tuckey, Dollard, Hosking & Winefield, 2009; Van den Broeck, Bailien & de Witte, 2011).

Shifting focus to the empirical evidence of the workplace aggression and job performance relationship, Bowling & Beehrs (2006) conducted one of the largest workplace aggression meta-analyses. In the meta-analysis, they combined 11 different types of workplace aggression constructs to assess the impact of aggression on the workplace. The meta-analysis only reported five studies that examined the effect of workplace aggression on job performance (other meta-analyses of note examining the workplace aggression and job performance relationship: Neilsen & Einarsen, 2012, $k = 3$; Schyns & Schilling, 2013, $k = 7$; Spector & Jex, 1998, $k = 2$). Although the number of empirical studies examining the relationship between workplace aggression and job

performance are limited, the results are consistent. Interpersonal conflict is by far the most researched type of workplace aggression in terms of its effects on job performance. Meta-analytic work by Spector and Jex (1998), De Dreu and Weingart (2003), and De Wit, Greer, and Jehn (2012) all examined the relationship between interpersonal conflict and performance and reported a consistent small to moderate negative relationship. The body of research on incivility and performance is limited, but consistent, with studies reporting a significant moderate negative relationship between the two (Sliter, Jex, Wolford, & McInnerney, 2010; Sliter, Pui, Sliter, & Jex, 2011; Sliter, Sliter, & Jex, 2012). Abusive supervision was found to be negatively related to supervisor rated job performance and to the formal appraisal processes in general (Harris, Kacmar, & Zivnuska, 2007). Furthermore, in their generalized leadership meta-analysis Schyns and Schilling (2013) found destructive leadership negatively affected individual performance. Their meta-analysis also examined abusive supervision as a subset of destructive leadership, reporting a negative relationship between abusive supervision and individual performance.

As one can see, the research is consistent but limited, prompting a need for further exploration of the workplace aggression to performance relationship. Given the similarities and consistency in the strengths of the relationships reported across each of the workplace aggression constructs with job performance, study two proposes that workplace aggression will be negatively related to job performance. Furthermore, an aim of study two is to examine the incremental (unique) variance of each of the five workplace variables, we propose the following hypothesis and research question:

Hypothesis 1: The five-workplace aggression constructs (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) will be negatively related to self-reported task performance.

Research Question 2: Will each of the five workplace aggression constructs (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) explain significant incremental (unique) variance in job performance?

Finally, psychological research has been criticized for placing an emphasis on the negative side of psychology, suggesting time and resources should be targeted at understanding the creative, positive, and emotionally fulfilling aspects of human behavior (e.g., Fullagar & Kelloway, 2009; Seligman & Csikszentmihalyi, 2000). These criticisms have sparked a resurgence in positive organizational research, focusing on such topics as flow, optimal experiences, positive deviance, and transcendent performance (e.g., Bakker, 2008; Cameron, Dutton, & Quinn, 2003; Luthans, 2001). However, throughout this resurgence, there has been a lack of integration between these positive psychological constructs and established workplace constructs. Of particular interest to workplace aggression research is the concept of flow-states. The present study seeks to bridge a gap in the literature through an examination of the impact of workplace aggression on flow-states at work and their impact on job performance.

Defining and conceptualizing flow and flow-states

Flow is defined as a state in which “people are so intensely involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at cost, for the sheer sake of doing it” (Csikszentmihalyi, 1990, p. 4). Building on

this research, Fullagar, Knight, and Sovern (2013) proposed that flow-states (i.e. a state manifestation of the flow experience) are characterized by “an exclusive and intense concentration on the task at hand, where there is an absence of distraction, a perception of time being distorted, and where action and awareness merge in the performance of the activity” (p. 237). Research has shown flow to be positively related to positive performance, increased creativity, and higher well-being (Clark & Haworth, 1994; Csikszentmihalyi, 1997; Csikszentmihalyi & LeFevre, 1989; Massimi & Carli, 1988; Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003; Schüler, 2007). This has led to the conceptualization of flow being an ‘optimal experience’ for work and productivity (e.g., Fullagar & Kelloway, 2009; Nakamura & Csikszentmihalyi, 2002).

Drawing on the COR theory, flow-state research has established the need for the presence and availability of job resources as a prerequisite for the attainment of flow-states (e.g., Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Nakamura & Csikszentmihalyi, 2009). These resources include, but are not limited to organizational support, a positive workplace culture, developmental resources, leadership, performance feedback practices, and the just allocation of job-related resources. Theoretically, if an organization is lacking the proper resources to allow an employee to fulfill these prerequisites, then individuals will be unable to experience a flow-state. Following this line of reasoning, studies have demonstrated that individuals with access to high levels of autonomy, social support, supervisory coaching, and feedback were found to be the most likely to enter a flow-state at work (e.g., Bakker, 2008). In a longitudinal study, Salanova, Bakker, and Llorens (2006) found that the

availability of organizational resources (e.g., social support and clear goals) were predictive of flow-state experiences up to eight months after those resources were made available. In a related longitudinal study, Houkes (2002) found organizational, personal, and job-related resources (including skill variety, task identity and significance, autonomy, and job feedback) had a causal relationship with intrinsic work motivation. Similar research has shown the availability of job resources to be positively related to intrinsic motivation, work engagement, job performance, and organizational citizenship behavior (Bakker, Demerouti, & Verbeke, 2004; Salanova, Agut, & Peiro; 2005; Salanova, Llorens, Cifre, Martinez & Schaufeli, 2003). Furthermore, research has shown the opposite to be true, reporting employee motivation and performance to be negatively impacted by actions seen as undermining learning opportunities and the accomplishment of established goals (e.g., Wong, Hui, & Law, 1998). These results suggest that workplace aggression may directly affect one's ability to enter a flow-state. However, to date, no research has examined how workplace aggression would affect or impede the experience of a flow-state in the workplace.

In its infancy, flow theory placed a heavy focus on the balance between challenges and skills (Csikszentmihalyi, 1975). However, as the understanding of flow grew, the emphasis on the challenge-skill balance was re-conceptualized from the major component of flow-state theory to one of nine components relevant to the flow-state experience, see Table 2 (e.g., Csikszentmihalyi, 1990, 1993; Jackson, 1996). The nine flow components have been established through both qualitative and quantitative research and have provided a guide for understanding and measuring flow (e.g., Csikszentmihalyi,

1990,1993; Jackson, 1996: Jackson & Ecklund, 2004; Jackson & Marsh, 1996). Through these nine components researchers are able to examine and measure flow-states either as a global construct (e.g. Demerouti, 2006) or through the assessment of flow-state component specific research, such as focusing solely on the skill vs. challenge (component one) of flow (e.g. Eisenberger, Jones, Stinglhamber, Shanock, & Randall, 2005). Research has also established what prerequisite characteristics must be inherent to the task or activity in order to elicit a flow-state. They are that (1) the perceived challenges of the task are equal to the individual's skills, (2) that the task has clearly defined and attainable goals, and (3) that the task provides feedback in such a manner that the individual is capable of monitoring their performance and progress towards the task goals (Nakamura & Csikszentmihalyi, 2009).

It should be noted that these concepts of flow do share some conceptual overlap with *employee engagement*, which is defined as the “harnessing of organization members’ selves to their work roles by which they employ and express themselves physically, cognitively, and emotionally during role performances” (Kahn, 1990; p. 694). However, scholars investigating the topic of employee engagement have noted that “employee engagement has been defined in many different ways and the definitions and measures often sound like other better known and established constructs” (Saks, 2005, p. 601). In numerous reviews and meta-analyses of the employee engagement literature, scholars have found that employee engagement has grown to include an employee’s psychological state (e.g., mood or commitment), their disposition (e.g., positive affect towards work), and has operationalized engagement both as a performance construct

(e.g., organizational citizenship behaviors as evidence of engagement) and as the level of personal expendable resources employees commit to their work (e.g., Macey & Schneider, 2008; Saks, 2005). Furthermore, Saks states that

“...although the definition and meaning of engagement in the practitioner literature often overlaps with other constructs... engagement is distinguishable from several related constructs, most notably organizational commitment, organizational citizenship behavior, and job involvement.” (p. 602).

In their review, Macey and Schneider (2008) emphasized the current lack of a uniformed definition of employee engagement across the literature, stating that “the use of engagement as a psychological construct in the research literature is no more precise; it is commonly used to refer to both role performance and an affective state, even within the same research context” (p. 5). The breadth of the engagement research is further confounded when including a number of “non-engagement” or “antithesis engagement” variables under the employee engagement umbrella that addresses how unengaged an employee is (e.g., burnout, disengagement, emotional exhaustion). In response to this, Macey and Schneider (2008) focused their review of employee engagement solely on the positive aspects of employee engagement as they thought it was “crucial to developing conceptual precision in that it maintains a clear intentional focus on benefits that inure to the organization” (p. 4). Due to this, employee engagement is often presented as being both attitudinal and behavioral, which has resulted in the literature defining employee engagement as a state (e.g., satisfaction, involvement), a trait (e.g., conscientiousness, proactive personality), and as a behavior (e.g., organizational citizenship behaviors,

proactive/personal initiative). This led to assertion that engagement may not be a single concept but instead a “profile model of a multidimensional construct, we see engagement as not only a set of constructs but also a tightly integrated set, interrelated in known ways, comprising clearly identifiable constructs with relationships to a common outcome” (p. 24).

When viewed from this perspective it is clear that while flow-state research does share elements found within the employee engagement literature, the current definition of employee engagement is so broad that it is almost a meaningless distinction, as the type of engagement being referred to must be immediately defined. When employee engagement does focus specifically on how an employee is engaged in their work, the focus is on vigor, dedication, and absorption (Schaufeli et al., 2002; Sliter, 2012). However, even these concepts are themselves broad and focus on a number of non-flow related points. Specifically, absorption is cast as being fully focused and engrossed in one’s job. Dedication is characterized as taking pride in one’s work and feeling that one’s work inspires the worker and creates an environment of enthusiasm and the perception that the work itself is meaningful and significant. Vigor refers to one’s cognitive resilience and energy levels at work, their willingness to invest their time and self into their work, and their desire to persevere through any work related challenges that may occur. In this regard flow has been considered to fall outside the broader generalization of engagement, functioning as an extreme form of engagement (Britt & Bliese, 1999; Sliter, 2012).

However, unlike some of the more traditional employee engagement constructs, such as organizational commitment, job satisfaction, job involvement, and positive affectivity, flow-states specifically emphasize and focus on the specific work tasks an employee is engaged in (which again, separates it from the conceptually similar framing of employee engagement discussed in the previous paragraph). This definition is outside the scope of the traditional employee engagement variables, such as an employee's engagement to their overall job (job involvement), to their organization (organizational commitment), their overall level of satisfaction with their job (job satisfaction), or their current mood/state of mind (positive affectivity). Thus, flow and flow-state research, while falling under the employee engagement umbrella (for it is a large and encompassing umbrella), focuses specifically on how engaged an employee is in their workflow specific to their work tasks (and flows impact in that engagement), rather than how an employee feels about their job, workplace, or organization.

Flow at work

In order to operationalize the concept of general flow-states into flow-states focused on workplace performance, Bakker (2005, 2008) collapsed the nine flow-state components into three core elements focused on the experience of flow and how flow-states occur in the workplace, see Table 2. The three elements are the individual's level of absorption in the task, their level of enjoyment attained from the task, and the intrinsic motivation the individual has in engaging in the task. Absorption refers to a state of intense or total concentration in which an individual loses awareness of their surroundings, loses time awareness, and becomes completely immersed in the task at

hand (e.g., Csikszentmihalyi, 1990). Enjoyment refers to employees who associate positive judgments or experience regarding the conditions and quality of their work tasks. This can be seen as the outcome of the affective and cognitive perceptions influenced by the flow experience (e.g., flow is a pleasurable state to reach, the paradox of control; e.g. Diener, 2000; Diener & Diener, 1996; Veenhoven, 1984). Intrinsic motivation refers to a continued self-driven motivation emphasized by an interest and engagement in the tasks the individual is performing (Csikszentmihalyi, 1997; Deci & Ryan, 1985; Harackiewicz, Barron, & Elliot, 1998). As discussed, the engagement literature conceptualizes these concepts in a different manner, focusing on a much broader sense of engagement such as how motivating one's job is (in its entirety), how committed one is to their job (in its entirety) or organization, or what type of moods their workplace generally elicits. All of this focuses on a more generalized vision of engagement that attempts to include a number of generalized engagement markers. Running counter to that, flow-states focus specifically on how the individual interprets the experience of flow concerning their specific work tasks (not the job as a whole) and is defined by an exclusive and intense concentration on those work tasks (Fullagar, Knight, & Sovern, 2013).

Scholars have posited flow-states to be positively associated with performance (e.g., Engeser & Rheinberg, 2008; Landhäußer & Keller, 2012). There are two reasons for this. The first is that flow-states are highly functional states that enable performance through increased levels of concentration and perceptions of control. The second is that intrinsic motivation toward the task being engaged in is a core element of flow, and as such, individuals in a flow-state will be motivated to engage in further tasks in order to

attain the experience of additional flow-states. When these two aspects of flow exist, individuals may enter a flow-state, motivating them to maintain the optimal challenge to skill balance, prompting engagement in more progressively complex tasks, which in turn will prompt them to learn or develop more complex abilities and skills (e.g., Csikszentmihalyi 1975; Nakamura & Csikszentmihalyi 2009; Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003). This suggests that the experience of flow itself can become a motivating force in increasing performance.

Research examining flow and performance is a new area of study, and current research focuses on performance inside and outside of the workplace (e.g., Aube, Brunelle & Rousseau; 2013; Bakker 2005; Demerouti 2006; Fullagar & Kelloway 2009; Nielsen & Cleal, 2010). Research from sports psychology literature has shown a moderate positive relationship between the experience of flow-states in team members and the overall team performance (Aube, Brunelle, & Rousseau, 2013). At the individual level, Bakker, Oerlemans, Demerouti, Slot, and Ali (2011) reported flow-states to correlate strongly with both self-reported measures of performance and coach-rated performance levels. In research specific to the workplace, a two-study paper by Kopperud (2012) reported similar findings to those from the sports literature, showing that the components of flow-states (absorption, enjoyment, and intrinsic motivation) were positively related to performance across both samples.

Although researchers have not directly investigated the influence workplace aggression has on the attainment of a flow-state, researchers have investigated how workplace aggression affects absorption, enjoyment, and intrinsic motivation. However,

it should be noted that this research cast these variables (absorption, enjoyment, and intrinsic motivation) not as they are presented in flow-state research (as brief mental states related to specific work or job tasks), but as larger antecedents or outcomes within the workplace engagement process that relate to a generalized assessment of the job, context, or environment as a whole (e.g., Saks, 2005).

Beginning with absorption, research has shown negative relationships between it and both incivility and abusive supervision to have with absorption (Sulea, Fischmann, & Filipescu, 2012). Reio and Sanders-Reio (2011) operationalized a component of workplace engagement as ‘availability engagement’, which is defined as the “physical, emotional, and psychological resources to invest one’s self in a work role” (p. 13). When assessed with workplace aggression, availability engagement reported a moderate negative relationship with both supervisor and coworker driven incivility. Research examining a more generalized workplace absorption, as defined by the employee engagement literature, has shown negative social interactions to be disruptive to one’s ability to focus as it impacts one’s task-focused cognitive resources, (Porath & Erez, 2007) and can induce negative attitudes that elicit ruminative thoughts (Cortina et al., 2001; Wittgenstein, 2013). In the same vein, research has shown that unlike the experience of positive emotions, which causes individuals to engage in behaviors that attempt to prolong the experience of positive emotions (Lazarus, 1991), the experience of negative emotions prompts a response focused on dealing with and removing the emotions (Brief & Weiss, 2002). Building upon this, research assessing the impact of workplace aggression on the experience of engagement has examined how absorption (or

work dedication) is influenced. Specifically, across the incivility, interpersonal conflict, and bullying research, workplace aggression has reported a small but consistent effect on one's ability to be absorbed in one's work (e.g., Suela, Vigna, Maricutoiu & Schaufeli, 2012). Given that research has shown that even the lowest form of workplace aggression can significantly impact the experience of work absorption in a general sense, it is believed that workplace aggression will impact the experience of absorption in the task specific sense. Furthermore, this relationship is likely to hold across aggression types.

Hypothesis 2: The five-workplace aggression constructs (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) will all be negatively related to the experience of the flow component of absorption.

To date, there has been no published literature examining how workplace aggression affects the enjoyment of work specific to an individual's work tasks or specific responsibilities. However, a body of research examining concepts similar to how an individual experiences enjoyment or happiness with their work does exist. As with absorption, these studies have focused on broader assessments of work focused enjoyment and were not specific to the state-enjoyment of work tasks. The results have been consistent in their findings, reporting a negative relationship of moderate strength between the workplace aggression and a general enjoyment of work (e.g., Felblinger, 2008; Frone, 2000; Hershcovis, 2011; Sulea, Fischmann, Filipescu, 2012; Wittgenstein, 2013). Approaching the relationship of workplace aggression and enjoyment from another angle, research that investigates unhappiness caused by work and workplace aggression is prolific. In this line of research, scholars have demonstrated depression to

function as one of the primary manifestations of unhappiness, showing that happiness and depression are in fact two sides of the same coin and represent the different end states of psychological, mental, or subjective well-being (e.g., Hills & Argyle, 2001; Beck, 1967; Cheng & Furnham, 2002; Diener, 1984; Diener & Lucas, 1999; Eysenck, 1990; Myers, 1993; Seligman & Csikszentmihalyi, 1975; Veenhoven, 1984). Research has shown workplace aggression to have a positive relationship with the experience of depression, showing that the experience of workplace aggression and feelings of unhappiness or depression are positively linked (e.g., Bowling & Beehr, 2006; Cortina, Magley, Williams, & Langhout, 2001; Estes & Wang, 2008; Frone, 2000; Hershcovis, 2011; Wittgenstein, 2013). These findings demonstrate the negative effect workplace aggression can have on the individual's psychological state of well-being by weakening or damaging it to the point where depression is experienced. Furthermore, as with absorption, the experiences of these negative emotional and mental responses hinder the individual's ability to engage positively with their environment, as they are forced to utilize their cognitive resources to mitigate the impact of experiencing workplace aggression. Thus, like absorption, we believe that workplace aggression will uniformly report a negative relationship with the experience of enjoyment as conceptualized by the flow construct.

Hypothesis 3: the five workplace aggression constructs (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) will all be negatively related to the experience of the flow component of enjoyment.

Generally, when motivation is discussed in combination with workplace aggression, the focus is on what motivated the perpetrator of the aggression to commit workplace aggression. There is currently a limited amount of research examining the effects of workplace aggression on the experience of intrinsic motivation (state or otherwise) within the workplace. When motivation is examined, broader intrinsic motivation research has shown both work climate, job context, and social interactions have a profound effect on an individual's experience of intrinsic motivation (e.g., Deci, Nezlek, & Sheinman, 1981; Deci & Ryan, 1980; Gagne & Deci, 2005). This susceptibility to external influences creates plasticity in intrinsic motivation, as negative social interactions (such as workplace aggression) can directly affect feelings of motivation. Along these lines of reasoning, researchers have shown that the experience of social stressors causes individuals to withdraw or "check out" from their work (Colbert et al., 2004). Further withdrawal occurs when the individual perceives the stressors as negatively impacting the support, encouragement or professional challenges they receive from their co-workers and supervisors. Furthermore, researchers have suggested that experiencing or even witnessing workplace aggression leads to feelings of disempowerment, which can hinder an individual's task motivation (Hornstein, 1996; Kane & Montgomery, 1998). Furthermore, Hornstein (1996) and Tepper (2000) showed that witnessing workplace aggression at either end of the spectrum (incivility and abusive supervision, respectively) were perceived as emotionally traumatizing events in the workplace (e.g., events that elicited strong negative emotions) and left the witness feeling as though they could also be the victim of workplace aggression. However, to date, only one study has directly assessed the impact of workplace aggression on the experience of

intrinsic motivation in the workplace, and the results were non-significant (Luo, 1999). However, the study suffered from a number of identified limitations. Given that researchers have posited and examined the idea that workplace aggression, ranging across types, can influence the experience of task related intrinsic motivation, it is proposed that workplace aggression will inhibit the experience of work related intrinsic motivation.

Hypothesis 4: The five-workplace aggression constructs (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) will all be negatively related to the experience of the flow component of intrinsic motivation.

Given that the evidence posits workplace aggression to be negatively related to the experience of both flow-states and job performance, and that the experience of flow-states have been shown to be positively related to performance (e.g., Kopperud; 2012); this study proposes that the experience of flow-states at work will mediate the workplace aggression and job performance relationship. Given that the experience of a flow-state has been shown to be a key element in understanding performance understanding the role of the flow-state experience within the workplace aggression and job performance context may be crucial to understanding how workplace aggression affects performance.

Hypothesis 5: Flow-states will at least partially mediate the relationship between workplace aggression (incivility, interpersonal conflict, bullying, social undermining, and abusive supervision) and job performance.

Finally, the purpose of this dissertation is to address two overarching questions: Does the workplace aggression literature have a terminological diversity problem, and

how does workplace aggression impact performance? The first question will be addressed through an examination of the construct and incremental validity of the five workplace aggression measures. The second question will be addressed through an investigation on not only workplace aggression's direct impact on performance ratings, but also on the mechanisms used by individuals to perform at their best (e.g., flow-states). This research will help to contextualize how workplace aggression impacts job performance.

CHAPTER III: METHOD

Study One

Participants & Procedures

Participants were employed part-time students at a large southern university recruited through the student research participant recruitment system. Participants were presented with an opportunity to be included in this study if they met the eligibility requirements. Participants had to be 18 years of age or older and work at least 20 hours per week. Each student was compensated with one (1) research credit for their participation and completion of the survey. The survey was accessed 507 times returning a final sample of 315 completed surveys reporting a completion rate of 62%. The sample had an average age of 22.7 years old ($SD = 4.73$), was 17.8% male (82.2% female), and worked an average of 2.7 hours a week ($SD = 8.61$ hours).

Measures

Incivility: Incivility was measured using Cortina, Magley, Williams, and Langhout's (2001) workplace incivility scale. The scale consists of seven items evaluated on a 5-point Likert scale ranging from 1 = none to 5 = always. Sample questions asked "how often in the last month have you been in a situation where any of your superiors or coworkers...", "...put you down or was condescending to you", and "...paid little attention to your statement or showed little interest in your opinion.". The coefficient alpha for this study was .92.

Interpersonal Conflict: Interpersonal conflict was measured using Jehn's interpersonal conflict measure (1995). The scale was comprised of eight total items, with four assessing task conflict and four assessing relationship conflict. The scale uses a 5-point Likert scale ranging from 1 = none to 5 = always. Sample questions included "How much friction is there among members in your work unit" for the task subscale and "to what extent are there differences of opinion in your work unit" for the relationship subscale. The coefficient alpha for this study was .88.

Bullying: Bullying was measured using the Negative Acts Questionnaire, which is an established measure of workplace bullying developed by Notelaers, De Witte, and Einarsen (2010). The 22-item scale was measured using a 4-point frequency scale ranging from 1 = never and 4 = about weekly or daily. The instructions asked, "During the last six months, how often have you been subjected to the following negative acts in the workplace..." and the items included statements such as "Ridicule or insulting teasing" and "Repeated reminders about your blunders.". The coefficient alpha for this study was .94.

Abusive Supervision: Abusive supervision was measured using the abusive supervision scale developed by Tepper (2000). The scale was comprised of 15 items and is measured using a 4-point scale ranging from 1 = "I cannot remember him/her ever using this behavior with me" and 4 = "He/she uses this behavior very often with me." Sample items ask whether the participant's boss has ever "given me the silent treatment" and "invades my privacy." The coefficient alpha for this study was .91.

Social Undermining: Social undermining was measured using the social undermining scale developed by Duffy, Ganster, and Pagon (2002). The scale was comprised of 26 items and is measured using a 6-point Likert scale ranging from 1 = never and 6 = every day. Sample questions asked how often supervisors or coworkers have “Hurt your feelings” or “Talked bad about you behind your back.” The coefficient alpha for this study was .95.

Analyses

A Confirmatory Factor Analysis (CFA) with Maximum Likelihood Estimation was used to examine research question one by examining the relative fit of a single factor model of all the construct items combined onto a single factor model (Figure 1) and a higher order model of incivility, interpersonal conflict, bullying, abusive supervision, and social undermining loading onto a higher order construct (Figure 2). Before collecting data sample power for the CFA was considered. While there is no hard and fast rule for CFA sample size, a literature review of best practices suggested that a sample size greater than 200 is recommended to reach acceptable power levels for the analysis (e.g., Garson, 2008; Gorsuch, 1983; Hatcher, 1994; Hutcheson & Sofroniou, 1999; Kline, 1979; MacCallum, Widaman, Zhang & Hong, 1999).

As recommended by a number of scholars (e.g., Bollen & Long, 1993; Hu & Bentler, 1998; Kline, 2011) the following four fit indices were used to evaluate the fit of the CFA models: Chi-Square Tests of Model Fit (χ^2), Comparative Fit Indices (CFI), Root Mean Errors of Approximation (RMSEA) with *p close* significance fit test, and Standardized Root Mean Square Indices (SRMR). The Chi-Square Tests of Model Fit is a

test of absolute fit and is one of the original fit indices. While it is an established fit test, it suffers from a number of weaknesses; such as susceptibility to sample size, model size, variable distribution, and missing data. These weaknesses have caused researchers to shy away from relying on it as the sole evidence for model fit (e.g., Floyd & Widaman, 1995; Hu & Bentler, 1998).

The remaining three fit indices are approximate fit indexes and are among the most widely reported within the structural equation modeling literature. SRMR examines the fit between the covariance residuals, which is the difference between the observed and predicted covariance. Researchers have defined SRMR to show acceptable levels of model fit at $\leq .10$ (Worthington & Whittaker, 2006) with scores falling $\leq .08$ considered good model fit (Hu & Bentler, 1998; Kline, 2005). RMSEA examines the strength and quality of fit, with lower scores suggesting stronger evidence for model fit. RMSEA has become one of the most, if not the most, widely used assessment of model fit in the applications of structured equation modeling (e.g., Jackson, Gillaspay, & Purc-Stephenson, 2009). Acceptable RMSEA evidence for model fit has been reported as $\leq .06$ by Hu and Bentler (1998) and $\leq .05$ by Worthington and Whittaker (2006). Finally, CFI examines the incremental improvement in the proposed model over a baseline model that assumes no correlations between the variables (Kline, 2011). However, a CFI can become compromised when this assumption of non-correlation is violated. For the CFI, research has suggested that a cut-off score of $\geq .90$ shows adequate model fit and that a score of $\geq .95$ suggests good model fit (Bentler & Bonnett, 1980; Hu & Bentler, 1998).

For the purpose of this study, we will define acceptable model fit at $CFI \geq .90$, $SRMR \leq .10$, and $RMSEA \leq .08$ and good model fit as $CFI \geq .95$, $SRMR \leq .08$ and $RMSEA \leq .05$.

Study Two

Participants and Procedures

Participants in this study were working adults who were contacted through Amazon.com's MTurk participant recruitment system. Data were collected via a third party data collection agency (Amazon.com's MTurk). To meet the eligibility criteria participants had to be 18 years of age or older, live in the U.S., and work a minimum of 40 hours per week. Participants were compensated one dollar (\$1) for their participation. Data collection was staggered across two collection points (time 1, time 2), with an average of 5.4 days between collection points. During the time one data collection point, workplace aggression variables and demographic information were collected. During the time two collection point flow and job performance data were collected.

The survey was accessed 378 times returning a final sample of 247 completed surveys reporting a completion rate of 65%. The sample had an average age of 40 years old ($SD = 11.88$), was 40.5% male (59.5% female), and worked an average of 39.2 hours a week ($SD = 6.8$ hours). The ethnic breakdown of this sample was: 85.8% White / Caucasian, 5.3% Hispanic, 3.2% African-American, 2.4% Asian, 1.6% Native American, and 1.6% as "Other". The educational breakdown for this sample was: 4 year College Degree 41.6%, Masters Degree 14.7%, 2-year College Degree 11.7%, Some college 21.5%, Doctoral Degree 0.8%, High School / GED 8.2%, and Professional Degree (JD, MD) 0.8%. The sample for study two contained a range of employment types, whose

breakdown was: 1.6% agriculture; 1.6% utility support, 3.2% construction; 8.1% manufacturing, 0.8% wholesaler, 12.1% retail, 1.6% transportation, 4.5% IT, 13% finance or insurance, 1.6% property management or sales, 7.3% professional, scientific or technical services, 1.6% in management, 4% in admin or support services, 12.6% in educational services, 10.5% healthcare, 4.5% art, entertainment or recreation, 4.0% food services, 7.3% other. Finally, participants were asked to identify their current employment as either a job or as their career. Participants responded with 42.3% reporting that their employment was “just a job” while 57.7% reported that they were working in a career.

Measures

Workplace aggression was measured using the same measures for incivility ($\alpha = .87$), interpersonal conflict ($\alpha = .92$), bullying ($\alpha = .89$), abusive supervision ($\alpha = .93$), and social undermining ($\alpha = .94$) that were used in study one.

Job Performance: Job performance was measured by a modified version of the in-role job performance scale developed by Podsakoff and MacKenzie (1989). This five-item scale used a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. Sample questions asked “I always complete the duties specified in my job description” and “I fulfill all responsibilities required by my job.” The coefficient alpha for this study was .77.

Flow: Flow was measured using the Work-Related Flow Inventory developed by Bakker (2008). This scale was comprised of 13 items, assessed the three components of flow (absorption, enjoyment, and intrinsic motivation) and used a 7-point scale ranging

from 1 = never to 7 = always. Sample questions include, “When I am working, I think about nothing else” and “I would still do this work, even if I received less pay.” The coefficient alpha for this study was .94.

Analyses

To determine adequate sample size to address the mediation hypothesis a power analysis was done using the PowMed tool created by Kenny (2015). To obtain statistically significant power the sample size for this study should be no lower than 219. This power analysis also fits the requirements for the CFA analysis, which recommends a sample size greater than 200 (Garson, 2008; Gorsuch, 1983; Hatcher, 1994; Hutcheson & Sofroniou, 1999; Kline, 1979; MacCallum, Widaman, Zhang & Hong, 1999). All regression and mediation analyzes controlled for age, gender, and race. These variables were controlled for as research has shown that the experience of workplace aggression can be interpreted differently depending on the individual’s contextual variables. For example, research has shown the different defensive strategies are employed by men and women when confronted with workplace aggression (e.g. Aquino & Thau, 2009; Baron, Neuman & Geddes, 1999; Bettencourt & Miller, 1996; Canary, Cuninghame & Cody, 1988; Schat, Frone & Kelloway, 2006). Finally, research question one from study one was revisited with the data from study two using the methods described in study one.

CHAPTER IV: RESULTS

Study One

The factor structure of workplace aggression

All variables were assessed for skewness and kurtosis, with no violations found. Descriptive and correlational data for the five workplace aggression measures can be found in Table 3. MPlus 5.1 was used to run the CFA. Table 4 reports the results of the CFA analysis of incivility, interpersonal conflict, bullying, undermining, and abusive supervision using a single factor model loading the raw items (Figure 1) and in a second order model loading the items on their original scales (Figure 2). The single factor model reported significant Chi-Square $X^2(2774) = 11816.69, p < 0.001$, a RMSEA = .11 with a $p \text{ close} < 0.01$, a SRMR = .09, and a CFI = 0.52. The single factor model only reported two fit indices scoring acceptable or better, those being a borderline RMSEA score and a SRMR fit index $\leq .10$. These results suggest poor model fit for the single factor model.

The second order model, which loaded the raw items on their original constructs and then on to the higher order workplace aggression construct (Figure 2) reported a significant Chi-Square $X^2(2769) = 9635.71, p < 0.001$, a RMSEA = .08 with a $p \text{ close} < 0.01$, a SRMR = .08, and a CFI = 0.64; with each constructs factor loading shown on Figure 3. These results show a good fit in the SRMR fit indices and adequate fit in the RMSEA. Although the second order model reports stronger fit indices than the single factor model across RMSEA and SRMR, its CFI still reports poor model fit. However, this is to be expected as research has shown that nested CFA models with correlated

items will restrict CFI scores as the CFI assumes items to be uncorrelated (e.g., Bentler, 1990). The second order model reported three fit indices of adequate or better suggesting at least adequate support for the second order model. These results suggest that the second order model reports a better fit over the single factor model and that the five workplace aggression constructs should be viewed as separate constructs that are related in nature. Additionally, Figure 3 shows the factor loadings for each individual scale on the latent workplace aggression construct. However, only three of the five scales are above the suggest cut score of $>.40$ (e.g., Matsunaga, 2010). To further examine the factor loading fit, these analyses will be replicated in study 2.

Study Two

All variables were assessed for skewness and kurtosis; no violations were found. A number of different types of analyzes were conducted. The first analysis is a simple hierarchal regression conducted in SPSS 20.0 and addresses hypothesis one through four and research question two. The second set of analyses was a mediation analysis conducted using the process macro (Hayes, 2012; Preacher & Hayes, 2004) in SPSS 20.0 and addressed hypothesis five and controlled for age, race, and gender. The secondary analysis SEM model conducted using AMOS 20.0, all indirect effect sizes were calculated using bootstrapping techniques set to a 1,000 iterations.

CFA Replication

A replication of the analysis addressing research question one from study one was done using the data from study two. Table 12 shows the results of the CFA analysis of incivility, interpersonal conflict, bullying, undermining, and abusive supervision in a

single factor model loading the raw items (Figure 1) and in a second order model loading the items on their original scales (Figure 2). The single factor raw items factor analysis reported a significant Chi-Square $X^2(2484) = 8998.31, p < 0.001$, a RMSEA = .10, a SRMR = .08, and a CFI = 0.55. The single factor model shows two fit indices scoring acceptable or better, those being a significant chi-square test and an SRMR fit index \leq .08. These results suggest poor model fit for the single factor model. These results echo the findings from study one and lend additional support to the lack of fit demonstrated through the single factor model.

The second order model, which loaded the raw items on their original constructs and then on to the higher order workplace aggression construct (Figure 2) reported a significant Chi-Square $X^2(2556) = 12854.07, p < 0.001$, a RMSEA = .09, a SRMR = .09, and a CFI = 0.48. The five workplace aggression constructs factor loadings can be seen in Figure 4. These results show a good fit for the Chi Square, adequate fit with the SRMR and borderline adequate fit in the RMSEA. Although the second order model reports stronger fit indices than the single factor model across RMSEA and SRMR, its CFI still reports poor model fit. As noted in study one, a low CFI may be due to the nested model restricting the CFI scores due to its assumptions. Overall, the second order model reported three fit indices of adequate or better fit. This suggests adequate support for the second order model and that the second order model reports an overall better fit than the single factor model. However, this delineation is not as clear as it was in study one as the model fit in the second order model in study two was not as strong as it was in study one. Furthermore, all five scales of the factor loadings (Figure 4) between each

constructs scale and the latent workplace aggression latent variable were above the suggest cut score of $>.40$, (e.g., Matsunaga, 2010).

Mediation

Table 5 begins to address hypothesis one, showing each of the five workplace aggression constructs to be negatively rated with self-rated performance (incivility $r = -.207, p < .01$; interpersonal conflict $r = -.205, p < .01$; abusive supervision $r = -.197, p < .01$, bullying $r = -.184, p < .01$, undermining $r = -.230, p < .01$). Table 6 shows that when accounting for age, gender, and race, all five of the workplace aggression constructs report significant relationships with performance ratings. The base model that included only age, gender, and race accounted for 8% of the variance ($F(3, 243) = 7.03, p < .001$) while each of the workplace aggression constructs reported significant effect sizes and significant increases in the variance explained over the base model (see Table 6). Both the correlational and regression evidence show a negative workplace aggression and performance relationship, supporting hypothesis one.

Table 6 also addresses research question two. As can be seen in the combined model, the only significant workplace aggression construct is undermining. When assessed separately, incivility accounted for an additional 4% of the variance explained ($F(1, 242) = 11.20, p < .01; \beta = -.20, p < .001$), interpersonal conflict accounted for an additional 4% of the variance ($F(1, 242) = 10.73, p < .01; \beta = -.20, p < .001$), abusive supervision accounted for an additional 4% of the variance ($F(1, 242) = 10.98, p < .01; \beta = -.20, p < .001$), bullying accounted for an additional 3% of the variance ($F(1, 242) = 8.57, p < .01; \beta = -.18, p < .001$), and social undermining accounted for an additional 6%

of the variance ($F(1, 242) = 15.72, p < .001; \beta = -.24, p < .001$). The combined model accounts for 15% of the variance ($F(5, 238) = 3.80, p < .001$) which is twice that of the base level model. However, the combined model does not account for much more of the variance in performance when compared to the individual workplace aggression models. Comparing the combined model with each of the five individual models suggest that when it comes to performance, each of the five workplace aggression constructs are capturing roughly the same variance with the exception for social undermining ($\beta = -.28, p < .05$). Thus, the data shows that when assessed together, only social undermining explains significant incremental variance in job performance, while the remaining four workplace aggression constructs reported no significant effect on performance, suggesting that there is very limited partial support towards research question two.

Hypothesis two examined the relationship between workplace aggression and the experience of becoming absorbed with one's work. Correlational evidence (Table 5) reported no significant correlations between any of the five workplace aggression constructs and absorption. Hierarchical regression analysis (see Table 7) further highlights the lack of any significant relationship between the five workplace aggression constructs and absorption. A base model comprised of our control variables (age, gender, and race) only accounted for 3% of the variance ($F(3, 243) = 3.55, p < .05$). Building on that model, Table 7 shows that no single workplace aggression construct added any significant level of variance explained to the relationship (incivility = $F(1, 242) = 0.20, p > .05$, interpersonal conflict = $F(1, 242) = 0.72, p > .05$, abusive supervision = $F(1, 242) = 0.20, p > .05$, bullying = $F(1, 242) = 0.42, p > .05$, social undermining = $F(1, 242) =$

0.00, $p > .05$). When assessed in concert, a combined model of all five workplace aggression constructs only accounted for an additional 2% of the variance in absorption and still failed to report a statistically significant relationship, $F(5, 238) = 1.19, p > .05$. These results fail to support hypothesis two, showing that workplace aggression and the flow-state component of absorption are not significantly related.

Hypothesis three examined the relationship between workplace aggression and enjoyment. Table 5 showed that at the correlational level all five workplace aggression constructs are significantly related to enjoyment (incivility $r = -.222, p < .01$; interpersonal conflict $r = -.234, p < .01$; abusive supervision $r = -.248, p < .01$, bullying $r = -.149, p < .05$, undermining $r = -.183, p < .01$). Hierarchical regression analysis (Table 8) showed the base model to account for 5% of the variance ($F(3, 238) = 5.38, p < .01$). All five workplace aggression constructs reported a negative effects on enjoyment, with incivility reporting an effect size of $\beta = -.22, p < .001$ ($F(1, 242) = 2.90, p < .001$); interpersonal conflict reporting an effect size of $\beta = -.23, p < .001$ ($F(1, 242) = 14.51, p < .001$); abusive supervision reporting an effect size of $\beta = -.25, p < .001$ ($F(1, 242) = 16.94, p < .001$), reporting an effect size of bullying $\beta = -.14, p < .05$ ($F(1, 242) = 5.39, p < .05$), and social undermining reporting an effect size of $\beta = -.19, p < .01$ ($F(1, 242) = 9.68, p < .01$). In addition, each workplace aggression construct was found to be significantly related to enjoyment with: incivility, interpersonal conflict, abusive supervision, bullying, and social undermining each respectively contributed an additional 5%, 5%, 6%, 2% and 4% towards the models explained variance.

A combined model comprised of all five workplace aggression constructs accounted for an additional 10% of variance explained over the based model (15% total variance explained; $F(5, 238) = 5.58, p < .001$). However, in the combined model, only abusive supervision remains a significant predictor of enjoyment ($\beta = -.33, p < .01$). These results support hypothesis three, reporting that workplace aggression can impact the experience of enjoyment in the workplace, and in one's work tasks. Furthermore, the combined model suggests that when it comes to enjoyment, abusive supervision may have the strongest impact and that the other workplace aggression constructs may be capturing the same variance.

Hypothesis four addressed the flow component of intrinsic motivation and posited that workplace aggression would be negatively related to its experience. Table 5 shows that four out of the five workplace aggression constructs reported negative correlations with intrinsic motivation, with bullying being the only non-significant relationship (incivility $r = -.139, p < .05$; interpersonal conflict $r = -.145, p < .05$; abusive supervision $r = -.174, p < .01$, undermining $r = -.13, p < .05$). A base model found that our control variables accounted for 2% of the explained variance in intrinsic motivation ($F(3, 243) = 2.32, p > .05$; see Table 9). As in the correlational results, only 4 of the five workplace aggression constructs were found to have a significant relationship with intrinsic motivation and account significantly more variance in their models. Incivility accounted for an additional 2% of the variance explained ($F(1, 242) = 4.88, p < .05$; $\beta = -.14, p < .05$), interpersonal conflict accounted for an additional 2% of the variance ($F(1, 242) = 5.41, p < .05$; $\beta = -.15, p < .05$), abusive supervision accounted for an additional 3% of

the variance ($F(1, 242) = 7.71, p < .01; \beta = -.17, p < .01$), and social undermining accounted for an additional 2% of the variance ($F(1, 242) = 4.59, p < .05; \beta = -.14, p < .05$). A combined model with all five of the workplace aggression constructs accounted for an additional 5% of the variance explained over the based model ($F(5, 238) = 2.66, p < .05$). However, only abusive supervision reported a significant relationship with intrinsic motivation ($\beta = -.26, p < .05$). These results partially support hypothesis four, showing that workplace aggression can negatively impact the experience of intrinsic motivation.

Hypothesis five stated that flow-states would mediate the relationship between workplace aggression and performance. Flow-states were shown to have partially mediated each of the five workplace aggression constructs relationships with self-rated measures of performance, see Table 11. Each workplace aggression model reported a significant direct effect on self-performance ratings, ranging from -0.39 to -0.16. The direct effect of flow remained consistent and significant across all five models reporting effect sizes between 0.13 and 0.14. Finally, the mediated indirect effect of workplace aggression through flow and on to performance also reported significant and consistent results (-0.04 to -0.05). Although there was some variability in the direct effect strength sizes between the five workplace aggression construct (e.g. interpersonal conflict reported an effect size of $b = -0.17, p < .001$ compared to social undermining's effect size of $b = -0.32, p < .001$) each workplace aggression model accounted for similar levels of variance, ranging between 16% and 18%. Thus, these results support hypothesis five and show that flow-states at least partially mediate the workplace aggression to performance

relationship. However, as can be seen in Table 11, the mediation effect of flow-states on the workplace aggression to performance relationship, while significant, was low.

Secondary Analysis

Given that there was evidence for a second order model loading the items on their original scales (Figure 2) but the regression results suggest that the different workplace aggression constructs contribute no additional unique incremental variance, an alternative model was investigated. Specifically, a mediation model was created using SEM techniques to assess whether a combined workplace aggression mediated model reported any significant variance differences compared to each individual mediated model. This model loaded the five workplace aggression constructs on to a latent workplace aggression variable (Figure 5) to investigate whether this conceptualization of the workplace aggression constructs can explain the disparity between the CFA results, which suggest that the five workplace aggression constructs are statistically unique, and the regression results, which suggest that they are not.

The fit of the model in Figure 5 was evaluated with AMOS 20.0 using a maximum likelihood algorithm, using the same fit guidelines that were used for the prior CFAs. The indices of model fit reported a statistically significant Chi-Square $X^2(34) = 83.81, p < 0.001$, a root mean square error of approximation (RSMEA) of .07 with a p close value of 0.02, a comparative fit index (CFI) of .96, and a standardized root mean square residual (SRMR) of 0.048. Although the significant chi-square points to ill fit, both the CFI and the SRMR suggest good fit and the RSMEA suggest adequate to borderline good fit. Thus, overall this model reports an adequate to good level of fit,

further supporting the findings from the second order CFA. Inspection of the residuals and the modification indices revealed no statistically significant points of ill fit in the model. Figure 6 reports the parameter estimates for the structural coefficients. Standardized coefficients appear on each path, with unstandardized coefficients in parentheses. For purposes of presentation, the correlations between exogenous variables are omitted. The residuals indicate the proportion of unexplained variance in the endogenous variables (i.e., they are error variances in unstandardized form). All of the path coefficients were statistically significant and the variables in the model accounted for approximately 8.7% of the variance in performance. For every one unit increase in the workplace aggression score, the flow-state score was predicted to decrease .376 units and the performance score would decrease by .295 units. A one unit increase in the flow-state score predicted a .129 increase in the performance scores. Table 13 presents the 95% confidence intervals for each of the unstandardized path coefficients. The analysis revealed that the total effect sizes for workplace aggression on performance scores showed that a one unit increase in workplace aggression scores were associated with a .344 decrease in performance scores. These results support hypothesis five, demonstrating the experience of flow-states to partially mediate workplace aggressions relationship with performance ratings. In addition, this model also shows strong fit indices in support for a higher order workplace aggression variable.. However, this latent variable model does not add any significant levels of new variance explained over the previous combined regression models. These findings support the findings from the second order CFA, which show that at the construct level, the five workplace aggression constructs have a unique factor structure. However, it also supports the mediation

analysis, showing that when the five workplace aggression constructs are applied to performance outcomes they contribute no unique variance over one another. These results help to solidify the overall findings in answering the terminological diversity problem question, by showing that the various workplace aggression constructs seem to be very limited in their ability to provide additional incremental variance.

CHAPTER V: DISCUSSION

The purpose of this dissertation was twofold, the first of which was to begin to address the terminological diversity problem with the workplace aggression literature across incivility, interpersonal conflict, abusive supervision, bullying, and social undermining. This was investigated across both studies, with study one focusing on the construct validity of the constructs and study two investigating the incremental predictive validity between the workplace aggressions constructs while also replicating the construct validity of the measures investigated in study one. The second point of emphasis of this dissertation was to examine the impact workplace aggression has on job performance through its influence on the experience of work related flow-states, given that individuals who experience flow-states report higher levels of both individual and team performance levels (e.g., Bakker, Demerouti & Euwema, 2005). Thus, instead of discussing each study individually, this discussion section will address both studies' results as they pertained to the two goals of this dissertation. The discussion section will then address the theoretical and practical implications of the findings and close with recommendations for future research opportunities and discuss possible limitations that should be considered when interpreting this dissertation's results.

The terminological diversity problem

Prompted by statements of concern and calls for action to address the possible terminological diversity problem in the workplace aggression literature, (e.g., Bowling & Beehr; 2006; Neuman & Baron, 2005; Raver & Barling, 2008) this dissertation addressed both the construct (research question one) and incremental (research question two)

validity of the five workplace aggression constructs of incivility, interpersonal conflict, abusive supervision, bullying, and social undermining. The original position of this dissertation was that while concerns of a terminological diversity problem did exist, the current state of research and the conceptualization of each of the different workplace aggression constructs suggested that they were unique enough to stand on their own. The CFA reported that the second order model reported better fit, demonstrating that at a factor level these constructs were unique enough to stand on their own. It should be noted that the findings of this dissertation support the existence of a latent workplace aggression variable, as was conceptualized by the second-order CFA model. This suggests that these constructs are tapping into a latent workplace aggression variable which is larger than any one of the constructs and may reflect a continuum that may not be directly observable or completely measurable by these constructs alone (Kline, 2011). However, the tests of unique variance (through regression and the subsequent SEM model) found that there were no differences in how they impacted the outcomes. In order to rule out a terminological diversity problem, the constructs would have needed to report unique factor structures and the addition of unique variance (Block, 1995), which did not happen.

The construct validity of the five workplace aggression constructs was investigated in both studies one and two, with both studies reporting stronger model fit for the second order model. These results suggested that each construct was unique enough in its factor loadings and failed to support a single factor model, which loaded all of the scales items onto a single workplace aggression construct. This suggests that

workplace aggression may be a latent variable under which all of the various workplace aggression conceptualizations may fall. However, even though the second order model reported better indications of model fit than the single order model, it would be hard to argue that the model reported anything better than an adequate fit overall, especially when viewing the question across both studies. Research question two addressed the second component of the terminological diversity question and investigated whether the workplace aggression constructs would add unique variance when measured in unison. The results from study two (Tables 6 through 10) showed that when assessed separately each of the workplace aggression constructs reported a significant relationship with performance, flow-states, and the individual components of flow-states. When viewed in the combined model almost all of the aggression constructs became non-significant predictors of performance, flow-states, and the flow-state components. Furthermore, the incremental variance explained in the combined and SEM models were only slightly larger than in the single construct models. Add to this the strong correlation sizes between the workplace aggressions constructs (Tables 3 and 5) that are close to the multicollinearity cutoff point and one can see that the results indicate that a terminological diversity problem does exist. These findings support Aquino and Thau's (2009) observations on workplace aggression literature, of which they stated that workplace aggression researchers "tapping different constructs may actually be tapping into the same general construct" (p. 732) and that "one measure may be as good as any other for examining the consequences of workplace victimization" (p. 732). However, there were outliers in these results, specifically with abusive supervision impact on

enjoyment, motivation, and the experience of flow-states; and with social undermining on performance. These findings will be discussed in greater detail further on in this section.

Workplace aggression, flow-states, and performance,

Understanding how workplace aggression impacts performance is critical in assessing and addressing the impact workplace aggression can have at both the individual and organizational level. To address this, hypotheses one through five investigated workplace aggression relationship impact on performance, flow-states, and flow-states' ability to mediate the relationship between workplace aggression and performance. Each of the five individual workplace aggression constructs (incivility, interpersonal conflict, abusive supervision, bullying, and social undermining) reported a significant negative effect on self-rated performance ratings, supporting hypothesis one. Hypotheses two through four predicted that workplace aggression would be negatively related to the individual components of flow, those being the absorption in one's work, enjoyment of one's work, and one's intrinsic motivation towards one's work. Of the three hypotheses, only hypothesis three (enjoyment) and four (motivation) were supported, as workplace aggression reported a non-significant relationship with task absorption (hypothesis two). However, overall the workplace aggression constructs were negatively related to the experience of flow-states (Table 10), showing that even without a significant relationship with absorption, workplace aggression did inhibit the experiences of flow-states.

Enjoyment reported a significant negative relationship with all five of the workplace aggression constructs when they were assessed individually, but in the combined model only abusive supervision remained a significant predictor of a lack of

enjoyment. This pattern emerged in the flow-state component of motivation as well, which reported four of the five workplace aggression constructs to have a significant negative relationship with motivation (only bullying was found to be non-significant). Again, when assessed in the combined model, only abusive supervision remained a significant predictor of motivation or on the experience of a flow-state. Furthermore, in the overall model of workplace aggression on flow-states, the same results were found, with four of the five workplace aggression constructs reporting significant negative relationships with the experience of flow-states(only bullying was found to be non-significant), both with abusive supervision being the only significant predictor when assessed in the combined model.

Enjoyment, motivation, and flow-states may be especially susceptible to the impact of workplace aggression from the supervisory level. Meta-analytical research has shown that workplace aggression perpetrated by someone in a supervisory or managerial position has a larger level of influence on the victim (Hershcovis & Barling, 2010). This is thought to occur for a number of reasons. The first is that a supervisor may be seen as an extension or representation of the organization, and responses to workplace aggression involving a supervisor would result in outcomes focused toward the organization, such as lower levels of satisfaction and commitment (Frone, 2000). Second, workplace aggression research has shown that as the levels of power distance between the perpetrator and victim grows the impact of workplace aggression also increases (e.g., Tepper et al., 2009; Thau et al., 2009; Wang, Mao, Wu & Liu, 2012). This occurs as workplace aggression and the power distance impact the victim's sense of justice (both

distributive and interactional; Thau & Mitchell, 2010; Wang, Mao, Wu & Liu, 2012). These feelings of justice have been shown to represent how employees personalize their relationships with both the people they work with and the organization they work for. Furthermore, individuals' perceptions of justice and injustice have been linked to a number of outcomes such as performance, organizational citizenship behaviors, and employee withdrawal (Cohen-Charash & Spector, 2001). Research has also shown that when employees feel a sense of injustice they will become motivated to even the score through reduced effectiveness and counterproductive work behaviors (Aryee, Chen, Sun & Debrah, 2007). Given that a supervisor acts both as a representative of the organization and as a gatekeeper of necessary resources and support, their perpetration of workplace aggression may support the victim's beliefs that their experience of injustice is somehow being condoned or supported by the organization, causing them to even the score by withdrawing from their work and thereby losing interest in their tasks and lowering their motivation to engage in their work related duties.

This research has also supported the conceptualization of workplace aggression as a job demand in the COR theory and the JDR model, as workplace aggression depletes an individual's mental resources through taxing their self-regulatory strength (Wang, Mao, Wu & Liu, 2012). Research specific to how abusive supervision impacts an employee's enjoyment towards their work tasks is limited. However, studies focusing on the broader conceptualizations of enjoyment (e.g., happiness and satisfaction) have shown negative relationships between workplace aggression and general enjoyment (e.g., Felblinger, 2008; Frone, 2000; Hershcovis, 2011; Sulea, Fischmann, Filipescu, 2012; Wittgenstein;

2013). Furthermore, research has also shown the inverse, that a positive relationship exists between supportive supervisor behavior and employee happiness (Rego & Cunha, 2008; Yoon & Thye, 2000). Couple this with the influence supervisors have in their roles as representatives of the organization (e.g., Frone, 2000) and one can see how an employee's supervisor may have a proportionally larger impact on how employees experience and react to their workplaces. Along these same lines of research, general intrinsic motivation research has shown that both work climate and social interactions have a profound effect on how employees associate and manifest their motivation toward work (e.g., Deci, Nezlek, & Sheinman, 1981; Deci & Ryan, 1980; Gagne & Deci, 2005). This research has suggested that the experience of workplace aggression can cause individuals to withdraw or "check out" from their work (e.g., Cohen-Charash & Spector, 2001; Colbert et al., 2004). These findings support statements by scholars who have posited that managers and supervisors have the greatest influence in creating an organizational culture in which employees are motivated and enjoy their work (e.g., Howard & Guild, 2000). Managers and supervisors do this through positive attitudes and valuing both the employee and their work. Given that the experience of workplace aggression functions counter to the establishment of those values and behaviors, one can see why workplace aggression in general and abusive supervision specifically plays a significant role in the attainment of the flow-state components of work enjoyment and motivation.

Of the three components of flow, only absorption reported a non-significant relationship with workplace aggression. This research is counter to what the established

literature suggested as research has shown workplace aggression to significantly impact an employee's ability to become absorbed or engaged in their work (e.g., Reio & Sanders-Reio, 2011; Sulea, Fischmann, & Filipescu, 2012; Suela, Vigra, Maricutoiu & Schaufeli, 2012). However, those research studies conceptualized absorption in a broader manner, investigating overall levels of absorption in one's job and role. Thus, this dissertation's findings failed to replicate the findings from the broader absorption studies at the granular level (specific to work functions and tasks). Established absorption research has cast absorption as how invested an individual is in their work role or their work identity (e.g., Reio & Sanders-Reio, 2011). This perspective examines absorption from a much larger and broader perspective than is used to understand absorption in relation to flow-states, which is conceptualized at a much smaller level and for a much shorter time. The flow-state operationalization of absorption describes it as "a short-term peak experience at work that is characterized by absorption, work enjoyment and intrinsic work motivation. Absorption refers to a state of total concentration, whereby employees are totally immersed in their work. Time passes quickly, and they forget everything around them" (Bakker, 2008, p. 401). Given that this form of absorption is of a much shorter state variety it is critical to understand how short term state absorption is experienced. Research investigating how individuals experience absorption has shown that motivation and enjoyment are two key elements required for absorption in one's current task or state as these experiences leads the individual toward absorption (e.g., Bakker, 2005; Rothbard, 2001). The interdependent symbiotic relationship between the three flow-state components is what creates the unique experience of the flow-state, as the three components become more than just the sum of their parts in creating a fully

immersive state of mind in the individual (e.g., Bakker, 2005; Csikszentmihalyi, 1990). This suggests that workplace aggressions impact on absorption as a short-term and peak experience manifestation may be more indirect (through enjoyment and motivation), which explains the context surrounding the non-significant results. Furthermore, given that the nature of flow-states, negative impact that workplace aggression has on both enjoyment and motivation may create an environment where the conditions to experience absorption do not exist and thereby hinder the manifestation of a short-term peak absorption experience before it can ever occur. Furthermore, this conceptualization is supported by both COR theory and the JDR model as workplace aggression acts as a demand or stressor on the individual, forcing them to shift their resources away from being able to experience absorption to dealing with threats to their motivation and enjoyment (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Hackman & Oldham, 1980; Makikangas, Bakker, Aunola, & Demerouti, 2010).

To examine this head-on a series of post hoc tests were run to examine enjoyment and motivations impact on absorption and to assess whether or not they mediated the relationship between workplace aggression and absorption using the same procedures and tools previously outlined in the results section. Beginning with a hierarchical regression model controlling for age, race, and gender, both enjoyment ($F(2, 241) = 26.264, p < .001; \beta = .38, p < .001$) and motivation ($F(1, 241) = 26.264, p < .001; \beta = .23, p < .01$) were found to be significant predictors of a short-term peak absorption experience, with the model accounting for 34% of the variance and adding an additional 31% variance over the base model which included only age, gender, and race. These results support the

conceptualization that the experience of both enjoyment and motivation impact the experience of a short-term peak absorption experience.

Enjoyment and motivation were then tested as mediators in the workplace aggression to absorption relationship, with all of the workplace aggression constructs being tested except bullying, as it was found to be non-significant in the individual model, see Table 7. Although each workplace aggression construct reported a non-significant direct effect on absorption (see Table 7), it did report a significant indirect effect through both enjoyment and motivation. The unstandardized indirect effects and confidence intervals (Lower level: LLCI, Upper level: ULCI) for the workplace aggression through enjoyment and motivation on absorption were: $B = -.18$ (LLCI = $-.33$, ULCI = $-.08$) and $B = -.07$ (LLCI = $-.18$, ULCI = $-.01$) for incivility, $B = -.18$ (LLCI = $-.32$, ULCI = $-.08$) and $B = -.07$ (LLCI = $-.17$, ULCI = $-.01$) for conflict, $B = -.25$ (LLCI = $-.43$, ULCI = $-.12$) and $B = -.10$ (LLCI = $-.22$, ULCI = $-.03$) for abusive supervision, and $B = -.22$ (LLCI = $-.43$, ULCI = $-.10$) and $B = -.09$ (LLCI = $-.23$, ULCI = $-.02$) for social undermining, respectively. These results suggest that enjoyment and motivation fully mediate the impact of workplace aggression on short term absorption experiences. Thus, this supports the conceptualization that enjoyment and motivation are key to experiencing short term absorption and that both enjoyment and motivation mediate the influence of workplace aggression on absorption, suggesting that although workplace aggressions direct impact on absorption is nonsignificant, its impact through enjoyment and motivation is.

With performance, all five workplace aggression constructs reported similar significant negative relationships with performance ratings and similar levels of explained variance in performance. In the combined model only social undermining remained a significant predictor of performance. Given that social undermining comprised of two subscales focusing on different sources of undermining, a follow-up analysis was conducted, see Tables 14 and 15. This was done to see if either subscale reported a significant difference in its impact on performance, as these subscales focus on different undermining behaviors stemming from two very different sources. Specifically, undermining looks at behaviors perpetrated by two specific sources, one being a supervisor and the other being the closest coworker to the employee. The post hoc analysis was done in order to determine if one of these sources of undermining was a stronger predictor of performance. When assessed in tandem, only coworker undermining remained a significant predictor of performance. This supports research that has shown coworker based workplace aggression to be detrimental to both individual and team performance (Jehn, Northcraft, & Neale, 1999; Jehn et al., 2001; Lovelace, Shapiro, & Weingart, 2001; Pelled, Eisenhardt, Xin, 1999). Furthermore, as outlined with abusive supervision, workplace aggression research has shown that the source of workplace aggression may influence the outcomes workplace aggression elicits (e.g., Frone, 2000; Bruk-Lee & Spector, 2006). Specifically, research has shown that coworker initiated workplace aggression leads to more personal outcomes such as depression, lower self-esteem, anger, and stress and anxiety (Frone, 2000; Bruk-Lee & Spector, 2006; Wittgenstein, 2013). Research has linked the experience of these behavioral and attitudinal outcomes to lower levels of performance as they act as a job demand on the

individual (e.g., Jamal, 1984; Pflanz & Olge, 2006; Sliter et al., 2011). Furthermore, social undermining's items directly focus on the behaviors of coworkers, unlike the interpersonal conflict, incivility, and bullying scales which differentiate between the roles of the perpetrators (see Appendix A). In addition, social undermining directly impacts performance as it can also hinder an employee's effective workspace by damaging the individual's reputation, interpersonal relationships, and access work-related resources (both tangible and intangible; Duffy, Ganster, & Pagon, 2002). This limits an employee's organizational citizenship experiences and their task performance, thereby removing or distancing that employee from the workplace's social experiences and lowering the employee's social worth in the organization. It accomplishes this as it persists over time by weakening and impacting an employee gradually and creating a sustained culture of undermining aimed at the victim (Duffy, Ganster, & Pagon, 2002). Finally, social undermining may be more efficient at capturing aggressions' impact on performance as it was the only workplace aggression construct that directly addresses attempts to hinder performance and an individual's support structure in a way to lower positive interpersonal relationships, work-related success, favorable reputation, and focuses on how perpetrators harm or hinder the victim's success (i.e., performance; Duffy, Ganster, & Pagon, 2002). It does this by creating a culture that hinders and removes support and resources from the victim through gossip, questioning their competence, withholding resources and information, and other undermining efforts (e.g., Chiaburu & Harrison, 2008). All of these aspects of social undermining work in tandem and may explain why in a combined model it was the only workplace aggression construct to be significantly related to performance.

Theoretical Implications

These findings challenge the current state of the workplace aggression literature, which emphasized the uniqueness of the five workplace aggression constructs. Although the second order model did report better model fit than the single factor model, when it came to the additive unique incremental variance between the workplace aggression constructs and flow-states, its components, and performance, the practical difference was negligible. This demonstrated that while each workplace aggression construct may have been conceptualized as a unique manifestation of workplace aggression, in practice that uniqueness may be limited to the theoretical conceptualization of the constructs and is unobservable at the practical level. So at the practical level, where workplace aggression actually impacts the world around it, the outcomes prompted by the experience of incivility are not more impactful than the outcomes prompted by conflict or undermining. This was seen consistently across all of the regression models and in the mediation models. Furthermore, mediation was also tested through an SEM model which loaded the workplace aggression constructs onto a latent variable. The SEM model reaffirmed the results from the CFA and regression models, showing that the latent model reported better model fit than the single factor model. However, the SEM models failed to provide any additional unique incremental variance, demonstrating that whether assessed as a single mediation model or as a second-order latent variable mediation model, the incremental variance across the different workplace aggression constructs was non-existent.

The findings from this dissertation suggest that there may not be one single definitive measure of workplace aggression and that different types of observed workplace aggression constructs may be needed to capture a holistic picture of workplace aggressions' impact. This was seen in combined models predicting performance and flow-states (and the components of flow), which saw both abusive supervision and social undermining become the only significant predictors while all the other workplace aggression constructs became non-significant. However, in the combined models, four of the five workplace aggression constructs were found to be non-significant and demonstrated no significant additions to the variance explained over the remaining significant construct. The findings from the combined models suggest that the non-significant workplace aggression constructs are acting as poor representations of the latent workplace aggression variable, as they provide no additional variance towards our understanding of the outcome variables. This can also be seen in the SEM model, which frames workplace aggression as a latent variable but still fails in explaining additional variance over either the combined model or even the single construct models. These findings across all of the regression and mediation analyses suggest that for flow-states and performance there was no added incremental variance gain to be had by using just the abusive supervision and social undermining based models. This demonstrates that for these outcomes a very real terminological diversity problem does exist. Future research will need to expand on these findings and assess where else this problem occurs, and what observable workplace aggression variables are most appropriate for use with what outcomes.

Given these findings, the concern of item overlap hindering these constructs uniqueness may be a very real issue as the only workplace aggression constructs that differentiate themselves significantly from their counterparts were supervisor abuse when assessed with enjoyment, intrinsic motivation, and the experience of flow-states; and social undermining when viewed in conjunction with performance. Oddly enough, both abusive supervision and social undermining reported the highest levels of item overlap with the other constructs, as can be seen in Table 1. However, as can be seen in Appendix 1, these were the only two workplace aggression constructs that specifically addressed whom their perpetrators were. This is doubly so in social undermining, as it asked the participant to limit their responses to whom they considered to be their ‘coworker closest to them’ and not coworkers in general. This suggests that item overlap may not be a primary driver of the terminological diversity problem but the non-specification of who the perpetrator is, as incivility, conflict, and bullying all assess workplace aggression from a much broader perspective, perpetrator wise. This further supports the need that in order to understand workplace aggression one must understand not only the context under which it occurs, but also the context of who the actors are and what roles they play.

Workplace aggression’s relationship with both the experience of flow-states and performance ratings was contextualized through two theories, COR theory and JD-R model. Both of these theories cast workplace aggression in the role of a job demand or job stressor that costs the individual resources as they must shift their focus and energies away from work and towards dealing with the experience and impact of workplace aggression. This is a commonly used and accepted perspective on how workplace

aggression impacts the individuals who experience it. Specifically, workplace aggression works to rob an individual's mental resources, physical resources, and emotional reserves by increasing the mental, physical, and physiological costs associated with their job (e.g., Ito & Brotheridge, 2012; Maslach & Jackson, 1986; Medina, Munduate, Dorado, Martinez, & Guerra, 2005). As the results demonstrated, this is precisely what workplace aggression does, as it directly limited individual's ability to enter flow-states by impacting their feelings of enjoyment and intrinsic motivation, and decreased their self-performance ratings. Furthermore, the mediation results, from both the regression models and the SEM model demonstrated how workplace aggression will push its impact on performance through the hindrance of flow-state experiences. This was seen as flow-states partially mediated the relationship between workplace aggression and performance, strengthening the effect workplace aggression had on performance. The flow-state literature has shown organizational, personal, and job-related resources, such as clear and attainable goals and positive social support climates, to bolster the experience of flow-states over time (Salanova, Bakker, and Llorens, 2006; Warr, 1990, 2007). Research on both COR theory and the JDR model has shown that workplace stressors, such as emotional and job demands impair the experience of flow-states by exhausting an employees' mental and physical reserves leading to the depletion of energy (i.e. a state of exhaustion) and to additional problems (e.g. Demerouti et al., 2000, 2001a, 2001b; Leiter, 1993). The findings from study two supports these conceptualizations and show workplace aggression acting as a job demand, negatively impacting both the flow-state experience and performance. Thus, when viewed through the COR theory and the JDR model, workplace aggression, through its role as a job demand detracted from the

available resources needed to reach adequate levels of performance. Furthermore, workplace aggression also hindered the individual's ability to enter and experience flow-states, as resources needed to be shifted to deal with the experience of workplace aggression. These findings continue to expand the understanding of how workplace demands impact workplace outcomes through the depletion of individual resources and begin to combine similar threads of research across different fields of study (Occupational Health Psychology and Positive Psychology).

Practical Implications

These findings should prompt workplace aggression scholars to take a step back and survey the workplace aggression literature with a broader perspective in mind. Given that these constructs are rarely tested in relation to one another, understanding where and when certain constructs do or do not add unique variance will become critical as it will allow the literature to generalize findings across aggression constructs where unique differences in variances are found, and allow for a more nuanced and directed examination of the impact of workplace aggression on outcomes where unique variance is found. However, given that the current body of literature, research directly investigating the differences of impact across workplace aggression constructs is somewhat limited, it will take a considerable effort before these boundaries are established. Future research should address this gap, especially towards the more established Occupational Health Psychology outcomes of mental health, physical health, wellbeing, and support.

These findings support the viewpoint of current political initiatives such as the Healthy Workplace Campaign that strives to create state and federal laws and protections addressing workplace aggression. Within the U.S., the Healthy Workplace Campaign focuses on “...repeated, health-harming mistreatment of one or more persons (the targets) by one or more perpetrators that takes one or more of the following forms: verbal abuse; offensive conduct/behaviors (including nonverbal) which are threatening, humiliating or intimidating; and work interference – sabotage – which prevents work from getting done” (Namie, 2016, p. “The Problem”). To date, 31 U.S. legislatures (29 States, 2 Territories) have introduced a version of the Healthy Workplace Bill with an aim at addressing the workplace aggression problem through stronger legal means with an emphasis on employee rights and protections. Three states in the U.S have passed legislation aimed at addressing workplace aggression. Tennessee passed House Bill No. 1981 / Senate Bill No. 2226 which requires government workplaces to address workplace aggression by either adopting the legislated workplace aggression policies or creating policies that are considered equivalent in nature. California passed AB 2053 which requires biannual two-hour training in abusive conduct for supervisors of all employers with more than 50 employees. Utah passed HB 216 which required state agencies to train supervisors and employees in preventing abusive conduct and behaviors. This bill stipulated that biannual training must include the definition of abusive conduct, its ramifications, resources available, and the employer's grievance process. In addition, professional development training will also cover ethical conduct and leadership practices based on principles of integrity.

In addition, legislation for a healthy workplace has received much stronger support at the international level. Laws protecting workers from and addressing the impact of workplace aggression were passed in Sweden in 1994, Britain in 1997, France in 2001, Australia in 2005 and 2011, Ireland in 2007, and in Canada in 2004, 2007, 2008, 2010, and 2011. Given the expanded legal ramifications that workplace aggression has internationally, and the expanding U.S. legislation coverage underway, understanding what behaviors fall under the workplace aggression umbrella will be critical in creating, supporting, and enforcing workplace aggression policies. Given the liability that employers will begin to face once workplace aggression laws are enacted (similar to sexual harassment and unsafe workplace liabilities), the terminological diversity problem must be resolved so workplace aggression will be clarified and defined properly. . The findings of this study help in addressing those needs and concerns, showing that even though workplace aggression has been examined and conceptualized in a number of different ways, its general impact and effect on workplace-related outcomes seem to be quite uniform.

Thus, the findings from these studies can assist organizations and managers in better creating and managing organizational policies toward workplace aggression. Given the uniformed nature of each of the workplace aggression constructs on performance and flow-states, these findings suggest that the constructs may be similar enough that no unique organizational policies would need to be created or developed to address each of these behaviors separately. The similarities across each of their individual models can be seen in Tables 6 through 10. Looking at the single construct model one can see that when

experienced individually, each of the constructs shows a fairly consistent impact on performance. Thus, these results suggest that a general workplace aggression policy and training procedure should be sufficient in addressing the different manifestations of workplace aggression.

Understanding and promoting an increased level of employee performance is a cornerstone of the Industrial Organizational field. However, within the workplace aggression literature, the focus on job performance has been limited. These findings showed that workplace aggression impacts performance overall, and hinders employees from performing at their highest levels of output due to workplace aggressions' limiting effect on the experience of flow-states. This is even more important for professions that rely on elements of creativity and require the ability to become immersed in their work (e.g., programmers, artists) or that benefit greatly when entering a flow-state (e.g., athletes, fighter pilots). Furthermore, researchers have argued that the experience of flow-states can reduce negative behaviors (Nakamura & Csikszentmihályi, 2002). Thus, the exposure to workplace aggression may create a self-fulfilling feedback loop where employees exposed to workplace aggression will experience fewer flow-states experiences and, therefore, may be prompted to engage in increased levels of negative workplace behaviors themselves. Furthermore, workplace aggression not only detracts from performance through the hindrance of flow-states, but it can work directly against the development, establishment, and sustainment of an organization's performance culture. Workplace aggression does this by undermining an organization's accountability, employee openness, and employee trust in their co-workers, leadership, and their

organization's competency. The findings from this dissertation show that organizational leaders and managers would be well served in not only addressing and managing the experience of workplace aggression (through policies, procedure, and the establishment of both formal and informal norms) but should attempt to get ahead of any possible workplace aggression problems by creating a culture where workplace aggression is not tolerated.

The impact workplace aggression has on performance has also become a concern outside of Occupational Health Psychology. Recently, business literature has turned its focus on understanding the damage workplace aggression can do to individual and organizational performance. Research from the Harvard Business School (Housman & Minor; 2015) has shown that toxic employees, which they define as "a worker that engages in behavior that is harmful to an organization, including either its property or people" (p. 2), subtract more value than even a superstar employee (as defined as being in the top 1% in terms of productivity) can produce. Specifically, research has shown that one toxic employee can negate the impact of two superstar employees and that a toxic employee costs about \$12,000 in actualized costs, which do not account for negative spillover in customer interactions, lower employee morale and commitments, and possible litigation fees. These findings echo research that has shown the monetary impact of workplace aggression to be upwards of \$24,000 per employee (due to losses in productivity, absence, medical costs, and turnover; e.g. Giga, Hoel, & Lewis, 2008; Sheehan, McCarthy, Barker, & Henderson, 2001; Tepper, Duffy, Henle, & Lambert, 2006). In addition, research by Porath and Pearson (2013) found that when experiencing

workplace aggression “48% of employees decrease their work effort, 47% reduced time spent at work, 38% intentionally decreased their quality of work, 80% lost time worrying about the incident, 63% lost time avoiding the offender, 66% said their performance declined... [and] that 25% admitted to taking out their frustrations out on their customers” (p. 117). These findings continue to highlight the dire consequences workplace aggression can have on an organization. This has prompted responses from leading business publications, such as the Harvard Business Review, to publish guidelines outlining how to avoid hiring or promoting toxic employees who are prone to displays of workplace aggression (Porath, 2016). As more research focuses on addressing the impact of workplace aggression on performance (and the pathways and mechanisms that lead to performance) this will create a much higher level of visibility and need for organizations to not only address and manage their workplace aggression policies, but to be proactive rather than reactive in tackling the issues and obstacles workplace aggression creates. This will only be further emphasized as organizations become more financially liable for the prevention and management of workplace aggression as laws continue to be introduced and ratified at both the state and national level (in the U.S.). The finding from this dissertation helps to support the need for organizations to address, manage, and reduce the occurrence and impact of workplace aggression.

Future Research

Based on the findings of this dissertation there are a few general areas that should be considered for further research. The first is the need to further test the incremental variance evidence for terminological diversity across other commonly researched

workplace aggression outcomes. Topics such as mental and physical health, employee well-being, burnout, commitment, turnover, and counterproductive work behaviors should all be examined in an effort to clarify where the terminological diversity problem exists and where current workplace aggression findings can be generalized. In addition, workplace aggression research needs to investigate how it impacts the workforce planning elements of an organization, with a focus on understanding whether different workplace aggression constructs impact employee retention and attrition differently. Additional avenues of research investigating other forms of performance should also be investigated as this study limited its scope of performance to self ratings. Future research should strive to involve a broader 360 performance perspective to ensure that workplace aggression impacts performance from all valid perspectives. Furthermore, contextual performance (e.g., organizational citizenship behaviors) should also be assessed as these types of contextual performance outcomes depend on a number of situational antecedents such as employee attitudes, mental states, justice perceptions, commitment, task characteristics, personality characteristics, and leadership behaviors (Organ & Ryan, 1995).

This research will allow for a better understanding regarding what workplace aggression constructs may be more appropriate to use in investigating specific workplace outcomes. In addition to this, future research should strive to establish the roles that individual differences play in the mediating and moderating roles of variables between the different workplace aggression constructs and their outcomes. While much of this research has been done at the individual workplace aggression construct level (e.g., Frone, 2000; Bruk-Lee & Spector, 2006; Hershcovis, 2011; Hershcovis, Turner &

Barling, 2007; Hutchinson, Vickers, Wilkes, & Jackson, 2009), studies examining multiple workplace aggression constructs are rare. Among those that have looked at multiple constructs, differences in how personality moderates the stressor-strain relationship have been found based on what workplace aggression construct was being assessed. Specifically, research has shown locus of control to moderate the relationship between incivility and stress, but not between interpersonal conflict and stress (Wittgenstein, 2013). The current state of the literature has found that individual factors such as the big five, trait anger, negative affectivity, and biological sex and situational factors like injustice, job dissatisfaction, situational constraints, and poor leadership can have a dramatic impact on shaping an individual's experience and reaction to workplace aggression (e.g., Hershcovis, Turner & Barling, 2007). However, research directly assessing the differences in how the specific workplace aggression constructs react to these individual and situational factors is lacking and is necessary to clarify if, how, and where the terminological diversity problem exists.

Furthermore, the Occupational Health Psychology field should assess whether research moving forward should continue to use these various workplace aggression constructs, or if a more holistic workplace aggression measure may need to be created. Although researchers have attempted to create overarching workplace aggression measures (e.g., Nixon & Spector, 2015), the broader workplace aggression research community has yet to adopt these as a standard of measurement, as they still prefer the individualized aggression constructs in their research. This may be due to a number of prominent research funding and grant agencies funding specific workplace aggression

construct research in the countries that have ratified workplace aggression legislation (e.g., anti-bullying initiatives by the European Science Foundation). These laws specify what type of workplace aggression constructs must be addressed in the workplace, and, therefore, what types of workplace aggression constructs need to be researched.

However, the findings from this dissertation suggest that an update to our understanding and conceptualization of what needs exist in the workplace aggression literature is needed. In response to this need, the Occupational Health Psychology field should place a greater emphasis on creating a more unified measure of workplace aggression, and create a stronger and more unified system of support in making such a measure a standard in the research community. While the use of a unified workplace aggression tool would potentially alleviate a number of the concerns prompted by the confirmation of the terminological diversity problem, two things would need to happen for it to become a reality. First, the scale would need to be tested against established workplace aggression models and outcomes to ensure there is criterion validity between it and the established findings that have been built in the workplace literature. Secondly, if shown to be as effective as individual measures in predicting key outcomes, researchers in this area should be willing to adopt its use. Without these two forces working in conjunction, any attempt to standardize the current workplace aggression construct quagmire will stagnate and fail to achieve meaningful change and lack the support needed to be adopted properly.

Finally, there are a few specific future research studies and experiments that should be conducted to further our understanding of how prevalent the terminological

diversity problem. First, the incremental variance between the different workplace aggression constructs must be examined with the established health and wellbeing outcomes. Second, the contextual environment around workplace aggression needs to be better understood as it relates to each construct. Things like personalities in the perpetrators and the victims, organizational culture and norms, training differences, age differences, power differences, gender differences, and actual aggression intensity levels should be assessed for their differences in impacting each of the workplace aggression constructs. Finally, while specific interventions have been shown to reduce incivility (e.g., the Civility, Respect, and Engagement in the Workplace intervention), it would be worthwhile to assess their ability to reduce other forms of workplace aggression. Establishing exactly where the similarities and differences are between the various workplace aggression constructs is crucial in creating a proper blueprint for understanding where and why the terminological diversity problem exists.

Limitations

This dissertation has a number of limitations that should be considered when interpreting the results of this study. The first is that a possible explanation for the second order model reporting better fit may have been created artificially through response bias, as each of the workplace aggression constructs was presented as a separate scale (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). Participants may have been encouraged to appear consistent in their answers and thus attempt to respond in a uniformed manner across all five scales given the similarity of the items. Future research can control for this by either randomizing the presentation of items or presenting all the

items across one scale. Furthermore, this study's results may be vulnerable to additional methodological limitations, such as common source biases and cross-sectional data biases (Podsakoff et al., 2003) and supporting ear. Common source bias occurs when the respondents provide the data for both the predictor and criterion variables. This may occur as the respondents are possibly motivated to provide data that may artificially influence the variables' covariance due to psychological factors such as social desirability, consistency motif, or other cognitive processes. However, research suggests that common method bias using self-report designs may not be as big of an issue as previously thought (Boswell, Boudreau, & Dunford, 2004; Spector, 2006). In this study, attempts to diminish the influences of common method bias procedures recommended by Podsakoff et al., (2003) were used. Specifically, participants were assured that their responses would be anonymous and that data would only be analyzed at the aggregate level, and data collection was conducted across two different time periods. This has been shown to alleviate respondent bias through a reduction of evaluation anxiety and to lessen the impact of social desirability (Podsakoff et al., 2003).

Conclusion

These findings begin to highlight the fact that that there is much to address in the investigation of the terminological diversity problem, and that this dissertation plays a small part in understanding if a problem does exist and if so, where its impacts may be. Workplace aggression research has been ongoing for the better portion of 25 years and has built a large body of literature examining how and why workplace aggression occurs, linking a multitude of contextual factors with the experience of workplace aggression.

This can be seen in the number of meta-analyses published (e.g., Bowling & Beehrs, 2006; De Dreu & Weingart, 2003; Hershcovis, 2011; Neilsen & Einarsen, 2012; Schyns & Schilling, 2013; Spector & Jex, 1998; De Wit, Greer, & Jehn (2012)). To fully investigate how widespread and deep the terminological diversity problem may be, a considerable effort will need to be made in order to understand where the construct overlap occurs. Research can be generalized to aid the current understanding of how workplace aggressions impacts those affected by it. This should include examining not only the relationship between workplace aggression and its outcomes but also the variables associated with the context and experience of workplace aggression itself. These include, but are not limited to the intensity of the experience, power distance between perpetrators and victims, roles between perpetrators and victims, frequency of behaviors, personality differences in both the perpetrators and victims, coping mechanisms and strategies employed by the victims, gender differences, race differences, organizational support and structural differences. As one can see, to fully understand and address the terminological diversity problem it will take a considerable amount of additional research.

This dissertation also examined the relationship between workplace aggression performance, and flow-state and how the experience of flow-states mediated the workplace aggression to performance relationship. Workplace aggression was found to be a negative predictor of both the experience of work related flow-states and individual level performance. Furthermore, flow-states were shown to mediate the workplace aggression to performance relationship. This shows that the experience of workplace

aggression not only hinders employee performance but also impacts the mechanisms employees use to achieve higher levels of performance, causing a double dip in the impact workplace aggressions has on performance. Given the prolific levels of employees who have been the victim of aggressive behaviors in the workplace (71% to 96% of employees; Cortina, Magley, Williams, & Langhout, 2001; Porath & Pearson, 2010) its financial costs, and the threat of organizational cost associated with workplace aggression liability due to federal and state legislative efforts, it is becoming increasingly critical to define and understand exactly how workplace aggression should be investigated moving forward. Given that there was evidence for the existence of a terminological diversity problem, future research will have much to address in framing out an understanding of where the problem does and does not impact our understanding of workplace aggression. However, when looked at as a whole, one thing about workplace aggression is becoming increasingly clear - it consistently negatively impacts desirable positive outcomes and further exacerbates negative ones.

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TABLES

Table 1: Workplace aggression item overlap

Items:	Workplace aggression constructs:				
	Incivility	Interpersonal Conflict	Social Undermining	Bullying	Supervisor Abuse
<i>Put down, condescending, or ridiculed:</i>	X		X	X	X
<i>Paid little interest to professionally:</i>	X		X	X	X
<i>Demeaning or derogatory remark:</i>	X		X	X	X
<i>Unprofessional behavior:</i>	X		X	X	X
<i>Ignored or excluding behavior:</i>	X		X	X	X
<i>Doubt or questioned judgment:</i>	X	X	X	X	X
<i>Unwanted personal discussions:</i>	X		X		X
<i>Personality conflict:</i>		X	X		X
<i>Emotional conflict:</i>		X	X		X
<i>Idea conflict:</i>		X	X		
<i>Work conflict:</i>		X	X		X
<i>Spreads gossip or rumors:</i>			X	X	X

Table 2: Flow components, definitions, and Bakker’s conceptualization

Flow component	Definition	Bakker's Conceptualization
Challenge-skill balance	In order to reach a flow state the level of skill possessed by the individual must be equivalent to the difficulty of the problem. Problems that are either beyond or beneath the individual’s skill set will elicit feelings of frustration or boredom in lieu of a flow state.	Absorption
Automatic and spontaneous task behaviors	This causes the individual to lose awareness of the self. This can be described as losing one’s self in the activity.	Enjoyment
Goal understanding	This provides a framework for the individual to work within and a firm understanding of what the activities goals are.	Intrinsic motivation
Feedback	This occurs when the task provides feedback in an immediate and clear manner allowing the individual to evaluate their progress towards the goal in real time.	Enjoyment
High level of concentration, focus, or involvement	This channels the individual’s attention towards the task and helps to eliminate or reduce the influence of distractions.	Absorption, Enjoyment, Intrinsic motivation
The paradox of control	This gives the individual the feeling of being in control without feeling of trying to be in control.	Absorption, Intrinsic motivation
Loss of the individual’s self-consciousness	The person becomes fully engaged with the activity and loses all concerns for the self.	Absorption, Enjoyment
The experience of time loss	Individuals experience a state in which time is transformed and the individual experiences a loss of time awareness.	Absorption, Intrinsic motivation
The autotelic experience	The autotelic experience suggests that the activities being engaged in are enjoyable to the point that they create a sense of intrinsic motivation for the individual based off their enjoyable and rewarding structures	Enjoyment, Intrinsic motivation

Table 3: Descriptive Statistics and Correlations – Study 1

Variables	M	SD	1	2	3	4
1. Incivility	2.31	0.78				
2. Interpersonal Conflict	1.77	0.70	.54**			
3. Abusive Supervision	1.48	0.64	.42**	.72**		
4. Bullying	1.27	0.35	.44**	.72**	.78**	
5. Undermining	1.31	0.49	.40**	.65**	.77**	.81**

N = 315 * = $p < .05$, ** = $p < .01$

Table 4: Fit Indices for CFA models – Study 1

Model	χ^2	df	CFI	Pclose	RMSEA	SRMR
Single factor model	11816.69*	2774	0.52	0.00	0.11	0.09
Second order model	9635.71*	2769	0.64	0.00	0.08	0.08

315 sample size df = degrees of freedom; CFI = comparative fit index; RMSEA = Root Mean Error of Approximation; SRMR = Standardized Root Mean Square. * $p < .001$

Table 5: Descriptive Statistics and Correlations – Study 2

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	40.03	11.89												
2. Gender	1.60	0.49	-0.002											
3. Race	1.37	1.08	-.163*	0.055										
4. Interpersonal Conflict	2.12	0.64	-0.029	-0.014	0.059									
5. Incivility	1.66	0.61	-0.003	-0.025	0.024	.686**								
6. Abusive Supervision	1.39	0.52	0.048	-0.031	-0.031	.593**	.759**							
7. Bullying	1.23	0.27	-0.032	-0.001	-0.024	.614**	.797**	.832**						
8. Undermining	1.33	0.43	0.013	0.022	0.006	.584**	.734**	.835**	.852**					
9. Flow	3.65	1.12	0.119	.184**	0.073	-.169**	-.154*	-.179**	-0.082	-0.124				
10. Performance	6.01	0.66	.195**	.204**	-0.010	-.205**	-.207**	-.197**	-.184**	-.230**	.296**			
11. Absorption	3.67	1.28	0.080	.175**	0.066	-0.054	-0.031	-0.032	0.036	0.002	.792**	.190**		
12. Enjoyment	4.28	1.37	.144*	.196**	0.042	-.234**	-.222**	-.248**	-.149*	-.183**	.899**	.350**	.569**	
13. Motivation	3.15	1.24	0.086	0.114	0.080	-.145*	-.139*	-.174**	-0.091	-.130*	.896**	.229**	.528**	.753**

$N = 247$, * = $p < .05$, ** = $p < .01$

Table 6: Hierarchical regression estimate for the Workplace Aggression constructs and Performance

Predictor	Model						
	1	Incivility	Conflict	Abuse	Bullying	Undermining	Combined
	β	β	β	β	β	β	β
Age	0.20	0.20	0.21	0.20	0.19	0.20	0.20
Gender	0.20	0.20	0.20	0.20	0.20	0.21	0.20
Race	0.01	0.02	0.01	0.02	0.01	0.01	0.02
Incivility		-0.20***					-0.08
Conflict			-0.20***				-0.09
Abuse				-0.20***			-0.01
Bullying					-0.18**		-0.06
Undermining						-0.24***	-0.28*
ΔR^2	0.08	0.12	0.12	0.12	0.11	0.14	0.15
F	7.03***	11.20**	10.73**	10.98**	8.57**	15.72***	3.80***

$N = 247$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 7: Hierarchical regression estimate for the Workplace Aggression constructs and Absorption

Predictor	Model 1	Incivility	Conflict	Abuse	Bullying	Undermining	Combined
	β	β	β	β	β	β	β
Age	0.09	0.09	0.09	0.09	0.09	0.09	0.11
Gender	.17**	.17**	.17**	.17**	.17**	.17**	.16**
Race	0.07	0.07	0.07	0.07	0.07	0.07	0.08
Incivility		-0.03					-0.08
Conflict			-0.05				-0.08
Abuse				-0.03			-0.14
Bullying					-0.04		-0.04
Undermining						0.00	-0.04
ΔR^2	0.03	0.00	0.00	0.00	0.00	0.00	0.02
F	3.55*	0.20	0.72	0.20	0.42	0.00	1.19

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

Table 8: Hierarchical regression estimate for the Workplace Aggression constructs and Enjoyment

Predictor	Model 1	Incivility	Conflict	Abuse	Bullying	Undermining	Combined
	β	β	β	β	β	β	β
Age	.15*	.15*	0.15	.16**	.15*	.16*	.18**
Gender	.19**	.19**	.19**	.19**	.19**	.20*	.18**
Race	0.06	0.06	0.08	0.05	0.05	0.06	0.07
Incivility		-.22***					-0.12
Conflict			-.23***				-0.15
Abuse				-.25***			-0.33**
Bullying					-0.14*		-0.05
Undermining						-.19**	-0.04
ΔR^2	0.05	0.05	0.05	0.06	0.02	0.04	0.10
F	5.38**	2.90***	14.51***	16.94***	5.39*	9.68**	5.58***

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

Table 9: Hierarchical regression estimate for the Workplace Aggression constructs and Motivation

Predictor	Model						
	1	Incivility	Conflict	Abuse	Bullying	Undermining	Combined
	β	β	β	β	β	β	β
Age	0.10	0.01	0.10	0.11	0.10	0.10	0.12
Gender	0.11	0.01	0.11	0.10	0.11	0.11	0.10
Race	0.09	0.09	0.10	0.09	0.09	0.09	0.10
Incivility		-0.14*					-0.07
Conflict			-0.15*				-0.09
Abuse				-0.17**			-0.26*
Bullying					-0.09		-0.03
Undermining						-0.14*	-0.08
ΔR^2	0.02	0.02	0.02	0.03	0.01	0.02	0.05
F	2.35	4.88*	5.41*	7.71**	1.82	4.59*	2.66*

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

Table 10: Hierarchical regression estimate for the Workplace Aggression constructs and Flow-States

Predictor	Model 1	Incivility	Conflict	Abuse	Bullying	Undermining	Combined
	β	β	β	β	β	β	β
Age	.13*	.13*	.13*	.14*	.13*	.14*	.16*
Gender	.18*	.18*	.18**	.17**	.18**	.18**	.17**
Race	0.09	0.09	0.09	0.07	0.08	0.00	0.1
Incivility		-.15*					-0.10
Conflict			-.17**				-0.12
Abuse				-.18**			-0.29*
Bullying					-0.08		-0.07
Undermining						-.13*	-0.06
ΔR^2	0.04	0.02	0.03	0.03	0.01	0.02	0.07
F	4.72**	5.99*	7.43**	8.32**	1.48	4.41*	3.58**

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

Table 11: Mediated regression of Flow on the Workplace Aggression to Performance Relationship

Incivility	Coefficient	SE	<i>t</i>	<i>p</i>	Model R ²
Direct effect					
Age**	0.01	0.00	2.80	0.006	
Gender**	0.21	0.08	2.66	0.008	
Race	0.00	0.04	-0.06	0.956	
Flow***	0.13	0.04	3.61	0.000	
Incivility**	-0.18	0.06	-2.83	0.005	0.17***
Indirect effect^a	<i>Effect</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
Incivility on Performance	-0.04	0.02	-0.08	-0.02	
Conflict					
	Coefficient	SE	<i>t</i>	<i>p</i>	Model R ²
Direct effect					
Age**	0.01	0.00	2.74	0.007	
Gender**	0.22	0.08	2.69	0.008	
Race	0.00	0.04	0.03	0.979	
Flow***	0.13	0.04	3.57	0.000	
Conflict**	-0.17	0.06	-2.69	0.008	0.16***
Indirect effect^a	<i>Effect</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
Conflict on Performance	-0.04	0.02	-0.09	-0.01	
Abusive Supervision					
	Coefficient	SE	<i>t</i>	<i>p</i>	Model R ²
Direct effect					
Age**	0.01	0.00	2.90	0.004	
Gender**	0.21	0.08	2.66	0.008	
Race	-0.01	0.04	-0.18	0.854	
Flow**	0.13	0.04	3.54	0.001	
Abusive Supervision**	-0.21	0.08	-2.69	0.008	.16***
Indirect effect^a	<i>Effect</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
Abuse on Performance	-0.05	0.02	-0.10	-0.02	
Bullying					
	Coefficient	SE	<i>t</i>	<i>p</i>	Model R ²
Direct effect					
Age**	0.01	0.00	2.66	0.008	
Gender**	0.22	0.08	2.69	0.008	
Race	-0.01	0.04	-0.23	0.820	
Flow***	0.14	0.04	3.88	0.000	
Bullying**	-0.39	0.14	-2.70	0.007	0.16***
Indirect effect^a	<i>Effect</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	

Bullying on Performance					
Social Undermining	Coefficient	<i>SE</i>	<i>t</i>	<i>p</i>	Model R ²
Direct effect					
Age**	0.01	0.00	2.87	0.005	
Gender**	0.23	0.08	2.83	0.005	
Race	0.00	0.04	-0.10	0.918	
Flow***	0.13	0.04	3.63	0.000	
Social Undermining***	-0.32	0.09	-3.54	0.001	.18***
Indirect effect ^a					
	<i>Effect</i>	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
Undermining on Performance	-0.04	0.02	-0.10	-0.01	

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

Table 12: Fit Indices for CFA models – Study 2

Model	χ^2	df	CFI	Pclose	RMSEA	SRMR
Single factor model	8998.312*	2484	0.55	0.00	0.10	0.08
Second order model	12854.07*	2556	0.48	0.00	0.09	0.09

N = 247 Note. *df* = degrees of freedom; CFI = comparative fit index; RMSEA = Root Mean Error of Approximation with Pclose; SRMR = Standardized Root Mean Square.

* $p < .001$

Table 13: Confidence Intervals for the Secondary Mediation Analysis Unstandardized Path Coefficients

Interval name	Coefficient	Lower CI	Upper CI	SE
Workplace Aggression to Flow	-0.376	-0.7092	-0.0428	0.17
Flow to Performance	0.129	-0.0474	0.3054	0.09
Workplace Aggression to Performance	-0.295	-0.3538	-0.2362	0.03

N = 247, CI = 95% confidence interval

Table 14: Correlations between Undermining Subscales and Performance

Variables	1	2	3
1. Performance	-		
2. Coworker Undermining	-0.224**	-	
3. Supervisor Undermining	-0.195**	.632**	-

$N = 247$, * = $p < .05$, ** = $p < .01$

Table 15: Hierarchical regression estimate for Social Undermining Subscales and Performance

Predictor	Control Model	Undermining
	β	β
Age	0.20***	0.21***
Gender	0.20**	0.20***
Tenure	0.01	0.02
Coworker		-.19*
Supervisor		-.08
ΔR^2	0.08	.14
F	7.03***	8.34***

$N = 247$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Figure 1: Single Factor Model of Workplace Aggression

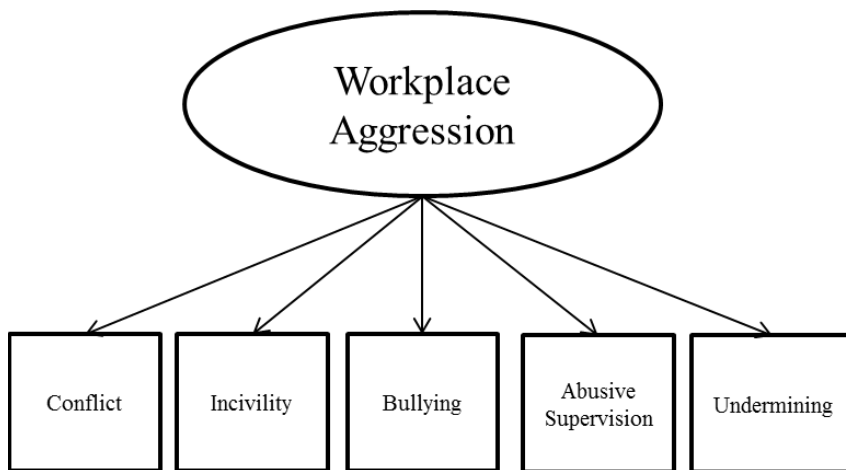


Figure 2: Second Order Factor Model of Workplace Aggression

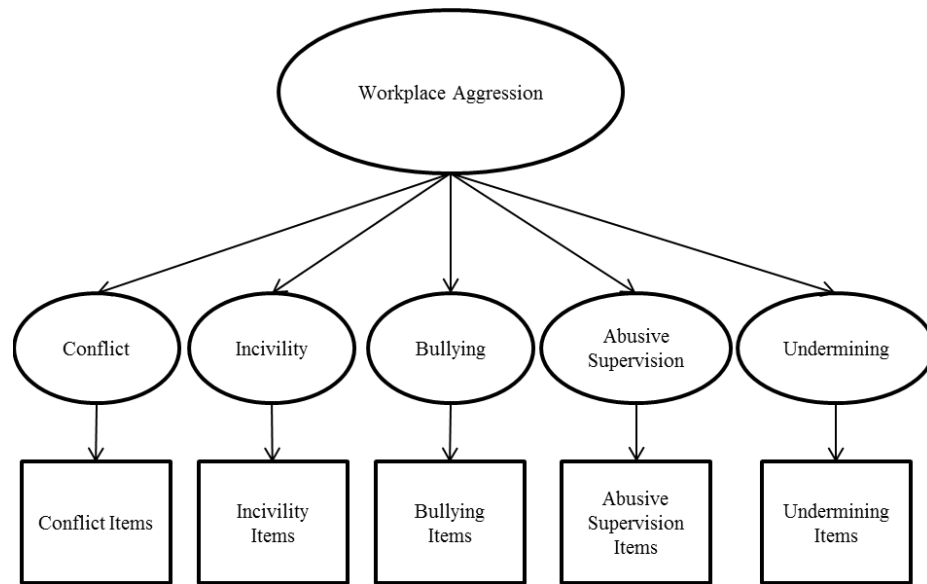


Figure 3: Factor Loadings for the Study One Second Order Factor Model of WPA.

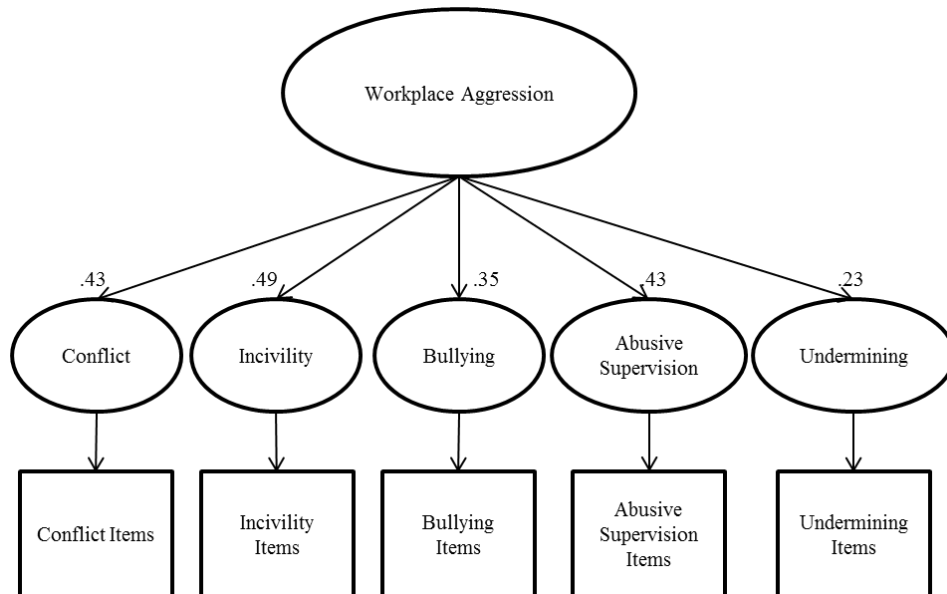


Figure 4: Factor Loadings for the Study Two Second Order Factor Model of WPA.

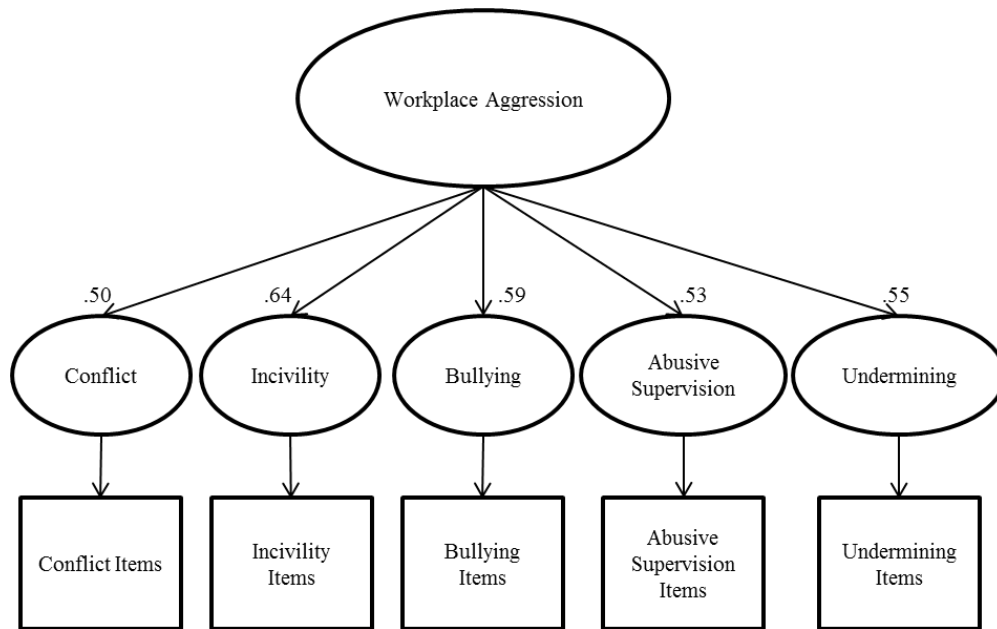
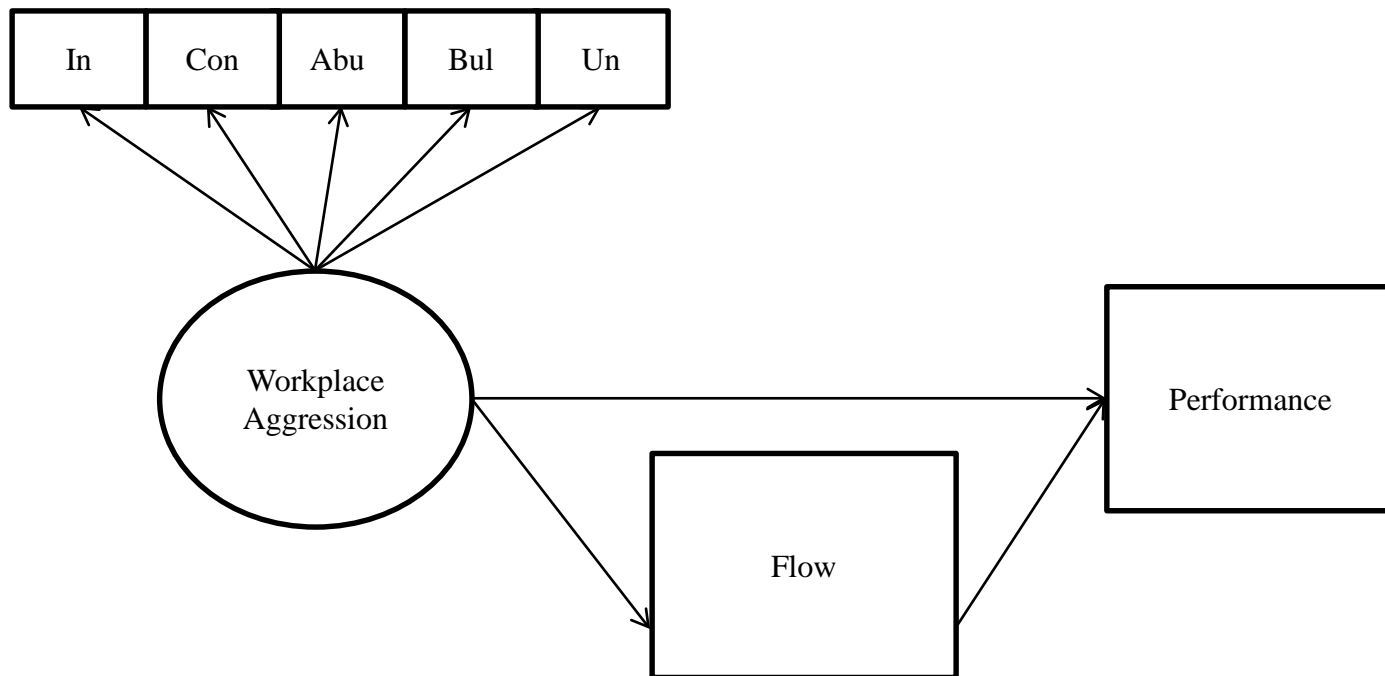
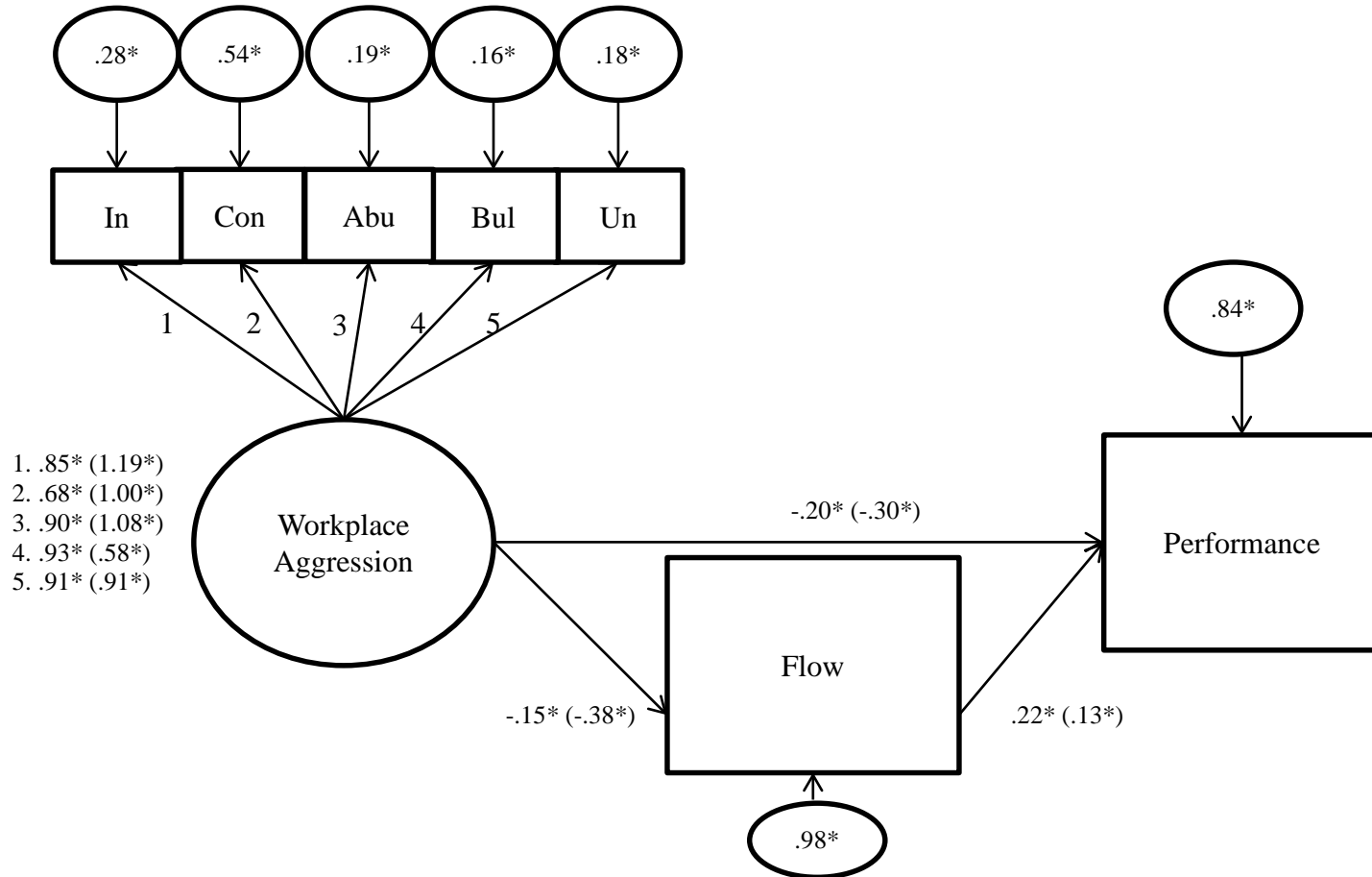


Figure 5: SEM Mediation Model with a Latent Workplace Aggression Variable



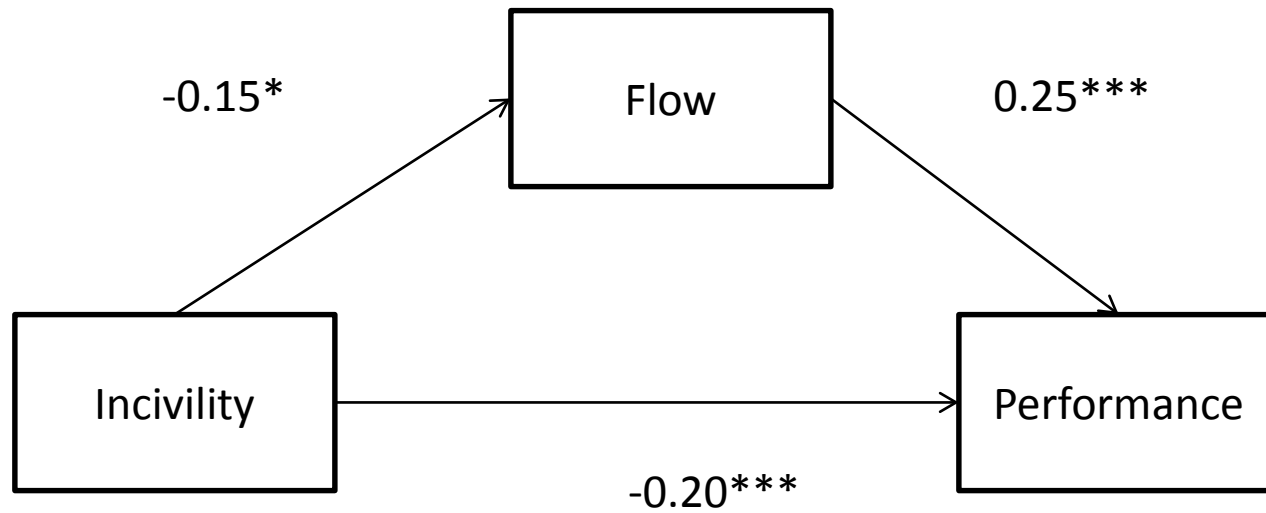
Note: In = Incivility, on = Interpersonal Conflict, Abu = Abusive Supervision, Bul = Bullying, Un = Social Undermining

Figure 6: SEM Mediation Model with Estimates for the Structural Coefficients



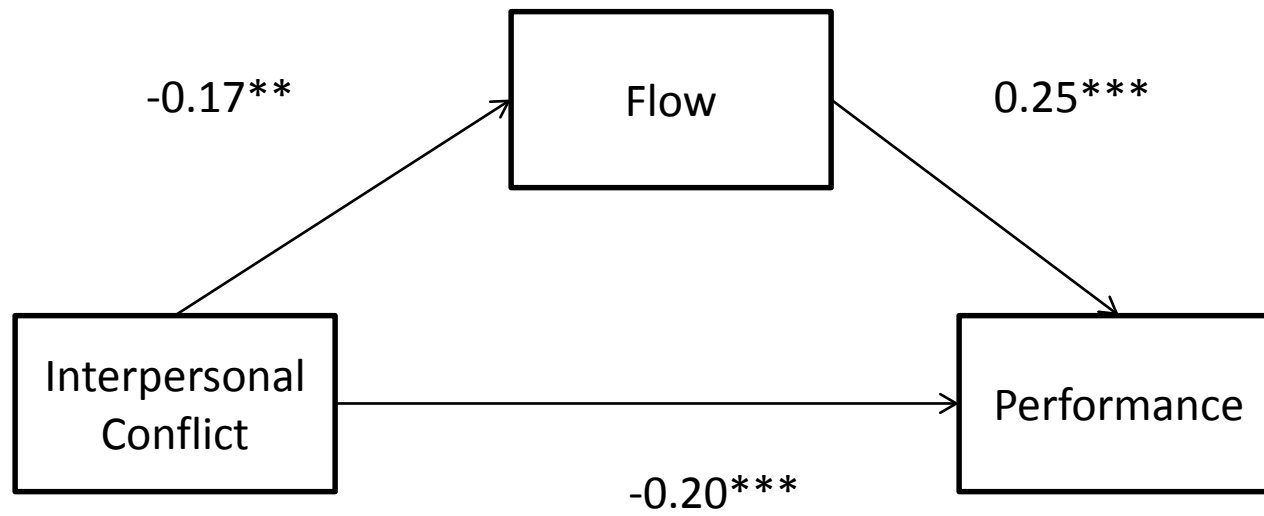
Note: $N = 247$, $* = p < .05$, In = Incivility, on = Interpersonal Conflict, Abu = Abusive Supervision, Bul = Bullying, Un = Social Undermining; Unstandardized coefficients in parentheses. For purposes of presentation, the correlations between exogenous variables are omitted. The residuals indicate the proportion of unexplained variance in the endogenous variables

Figure 7: Flow-states Mediating Incivility to Performance



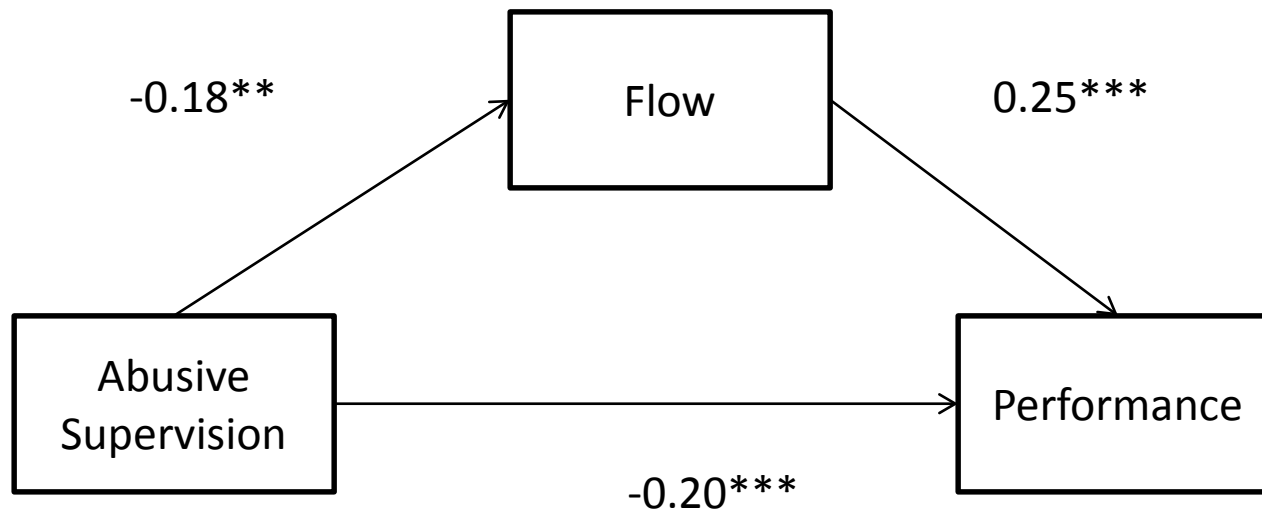
Note: N = 247, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Figure 8: Flow-states Mediating Interpersonal Conflict to Performance



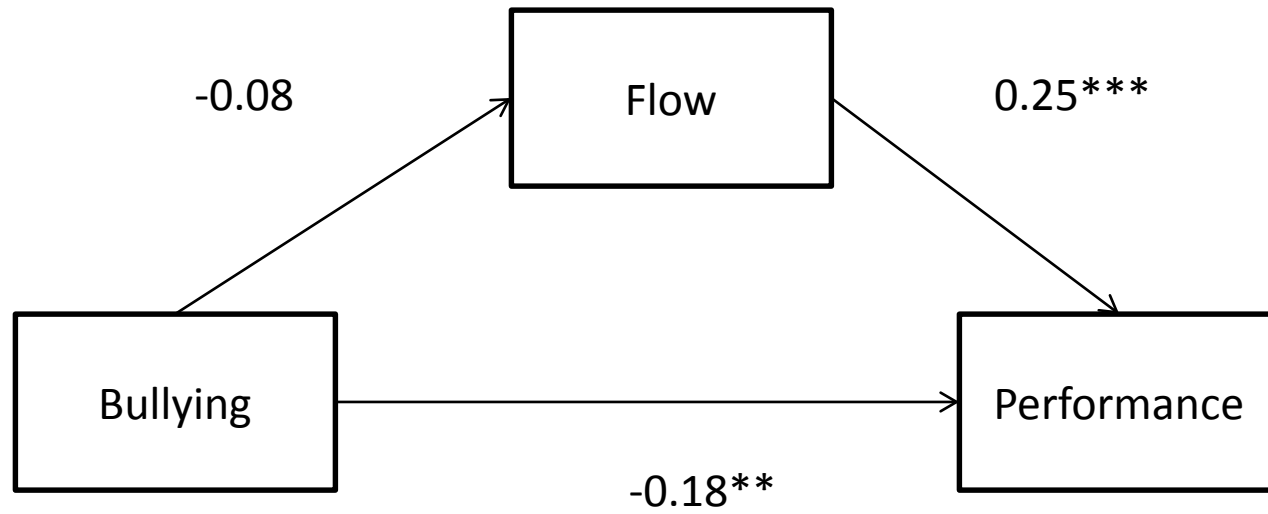
Note: N = 247, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Figure 9: Flow-states Mediating Abusive Supervision to Performance



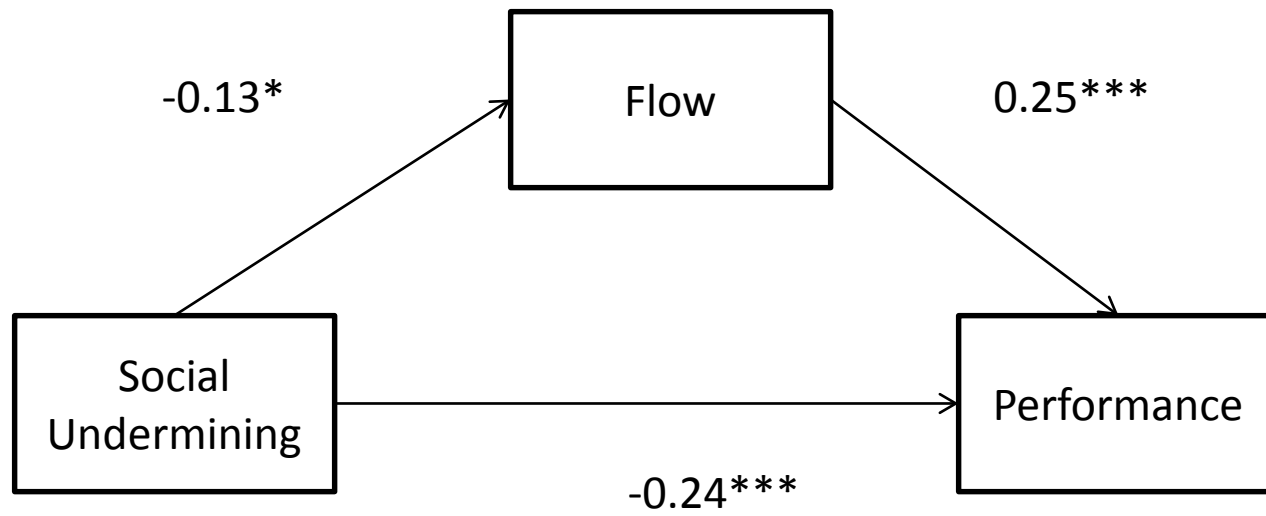
Note: N = 247, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Figure 10: Flow-states Mediating Bullying to Performance



Note: N = 247, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Figure 11: Flow-states Mediating Social Undermining to Performance



Note: N = 247, * = $p < .05$, ** = $p < .01$, *** = $p < .001$

APPENDICES

Appendix 1

Interpersonal Conflict: Jehn's (1995) Interpersonal Conflict Scale:

Instructions: On a scale of 1 to 5, with 1 being none and 5 being an extreme amount, please answer the following questions to the best of your ability.

- How much friction is there among members in your workplace?
- How much are personality conflicts evident in your workplace?
- How much tension is there among members in your workplace?
- How much emotional conflict is there among members in your workplace?
- How often do people in your workplace disagree about opinions regarding the work being done?
- How frequently are there conflicts about ideas in your workplace?
- How much conflict about the work you do is there in your workplace?
- To what extent are there differences of opinions in your workplace?

Incivility: Cortina, Magley, Williams, and Langhout's (2001) Workplace Incivility Scale

Instructions: On a scale of 1 to 5, with 1 being never and 5 being all of the time, please answer the following questions to the best of your ability. In general have you been in a situation where any of your superiors or coworkers:

- Put you down or was conceding to you?
- Paid little attention to your statement or showed little interest in your opinion?
- Made demeaning or derogatory remarks about you?
- Addressed you in unprofessional terms, either publicly or privately?
- Doubted your judgment on a matter over which you have responsibility?
- Ignored or excluded you from professional camaraderie?
- Made unwanted attempts to draw you into a discussion of personal matters?

Bullying: Notelaers, De Witte, and Einarsen's (2010) Negative Acts Questionnaire

Instructions: On a scale of 1 to 4, with 1 being never and 4 being weekly/daily, please rate: during the last six months, how often have you been subjected to the following negative acts in the workplace?

- Someone withholding necessary information so that your work gets complicated
- Ridicule or insulting teasing
- Ordered to do work below your level of competence
- Being deprived of responsibility or work tasks
- Gossip or rumors about you
- Social exclusion from co-workers or work group activities
- Repeated offensive remarks about you or your private life
- Verbal abuse
- Hint or signals from others that you should quit your job
- Physical abuse or threats of physical abuse
- Repeated reminders about your blunders
- Silence or hostility as a response to your questions or attempts at conversations
- Devaluing of your work and efforts
- Neglect of your opinions or views
- "Funny" surprises
- Devaluing of your "rights" and opinions with reference to your age
- Exploitation at work, such as private errands
- Reactions from others because you work too hard
- Unwanted sexual advances
- Unwanted sexual attention
- Offending telephone calls or written messages
- Devaluing of your "rights" and opinions with reference to your gender

Abusive Supervision: Tepper's (2000) Abusive Supervision Scale

Instructions: On a scale of 1 to 5, with 1 being never and 5 being very often, please answer how often your boss or supervisor...

- Ridicules you
- Tells you your thoughts or feelings are stupid
- Gives you the silent treatment
- Puts you down in front of others
- Invades your privacy
- Reminds you of your past mistakes and failures
- Doesn't give you credit for jobs requiring a lot of effort
- Blames you to save himself/herself embarrassment
- Breaks promises he/she makes
- Expresses anger at you when he/she is mad for another reason
- Makes negative comments about you to others
- Is rude to you
- Does not allow you to interact with my coworkers
- Tells you that you are incompetent
- Lies to you

Social Undermining: Duffy, Ganster, and Pagon's (2002) Social Undermining Scale

Instructions: On a scale of 1 to 6, with 1 being never and 5 being very often, please answer how often has your supervisor intentionally...

- Hurt your feelings?
- Put you down when you questioned work procedures?
- Undermined your effort to be successful on the job?
- Let you know they did not like you or something about you?
- Talked bad about you behind your back?
- Insulted you?
- Belittled you or your ideas?
- Spread rumors about you?
- Made you feel incompetent?
- Delayed work to make you look bad or slow you down?
- Talked down to you?
- Gave you the silent treatment?
- Did not defend you when people spoke poorly of you?
-

Instructions: On a scale of 1 to 6, with 1 being never and 5 being very often, please answer how often has the coworker closest to you intentionally...

- Insulted you? Gave you the silent treatment?
- Spread rumors about you?
- Delayed work to make you look bad or slow you down?
- Belittled you or your ideas?
- Please select everyday
- Hurt your feelings? Talked bad about you behind your back?
- Criticized the way you handled things on the job in a way that was not helpful?
- Did not give as much help as they promised?
- Gave you incorrect or misleading information about the job?
- Competed with you for status and recognition?
- Let you know they did not like you or something about you?
- Did not defend you when people spoke poorly of you

VITA

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