Workplace Aggression and the Moderating Effects of Violence Prevention Climate

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Abstract

The purpose of this study was to both examine the dimensionality of several constructs of workplace aggression, and to determine whether violence prevention climate perceptions could moderate potential negative ramifications within a well-established occupational stress framework. A Qualtrics panel of 315 employees from a diverse range of occupation answered a series of online questionnaires pertaining to their occupational risk and exposure to violence and aggression, psychological well-being, and fear of future violence. Results from confirmatory factor analyses indicated a six-factor structure such that all constructs of workplace aggression were empirically distinct from one another. Moderation analyses themselves revealed unique patterns of moderations based on the various dimensions of violence prevention climate. Implications concerning both the unique factor structure and moderation results are discussed.

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Workplace Aggression and the Moderating Effects of Violence Prevention

Climate

Workplace aggression has substantial and negative effects that accrue to both

organizations and individuals alike (LeBlanc & Kelloway, 2002; Neuman, 2012; Rogers

& Kelloway, 1997). Despite this, aggressive behavior in organizations has only been

studied for the last 20 years (Barling, 1996). However, since then a plethora of conceptual

and operational definitions have quickly emerged – something which has not escaped the

attention of reviews over the years (Kelloway, Barling, & Hurrell, 2006a; Keashly &

Jagatic, 2002; Neuman & Baron, 1998; Schat & Kelloway, 2005; Snyder et al., 2005).

For example, forms of organizational mistreatment may be labeled as bullying (Rayner,

1997), incivility (Andersson & Pearson, 1999), emotional abuse (Keashly, Hunter, &

Harvey, 1997), and workplace aggression (Neuman & Baron, 1998). These

aforementioned constructs are defined in such a way as to give consideration towards

several dimensions of aggressive behavior, such as the intent, severity, perpetrators,

victims, and outcomes, among other elements (Snyder et al., 2005).

Although these distinctions allow researchers to examine specific behaviors

related to occupational aggression, some authors have argued for their similarities,

asserting that there is considerable definitional, conceptual and measurement overlap

found within these constructs (Aquino & Lamertz, 2004; Hershcovis, 2011; Lapierre,

Spector, & Leck, 2005). Hershcovis (2011), for example, claimed that "while each of

these constructs differentiates itself theoretically, these differences are *assumptions of the*

definition and conceptualization" (p. 505). Given the significant ramifications of

workplace mistreatment, it is important to assess whether or not such differentiation is

contributing to important theoretical insights, or if a reconsolidation of aggressive behaviors is necessary in order to advance the field.

This is the first goal of my thesis. I proposed and tested measurement models of organizational mistreatment by using existing measures of bullying, incivility, sexual harassment, violence (both physical and vicarious exposure) and verbal/psychological aggression. The goal of these analyses was to ascertain whether these measures represent a single construct (e.g., workplace aggression) or whether these behaviors represent distinct forms of organizational mistreatment.

While exploring the dimensionality of workplace mistreatment is important, so are the negative ramifications their exposure brings to employees. As such, my thesis contains an additional study which explores this notion, and preventative measures, in further detail.

Whatever the outcome of the previous analyses, it is clear that organizations have a vested interested in reducing employees' exposure to these forms of mistreatment. Indeed, in many Canadian jurisdictions (e.g., Ontario, B.C., the Federal jurisdiction) employers are legally obligated to address violence and harassment in the workplace. Kessler, Spector, Chang, & Parr (2008) have proposed a measure of violence prevention climate that assesses' employee perceptions of whether or not the organization is concerned with addressing issues of organizational mistreatment. As a second goal, I integrate this measure into a well-established model (LeBlanc & Kelloway, 2002; Rogers & Kelloway, 1997; Schat & Kelloway, 2000) of how employees experience workplace aggression and test specific hypotheses about how violence prevention climate affects the propositions of this model.

Theoretical Background

Defining workplace aggression has been a longstanding issue among researchers in academic circles (Keashly & Jagatic, 2002; Neuman & Baron, 1998; Snyder et al., 2005). Broadly speaking, forms of organizational mistreatment manifest themselves in various ways, ranging from small nonphysical behaviors such as being angrily reprimanded by a co-worker or supervisor, to serious nonphysical aggression such as verbal threats and sabotage, up to the most serious forms of assault and murder. In addition to the intensity of the behaviors, perpetrators can either be organizational outsiders or insiders, often resulting in drastically different motives and antecedents. These two characteristics alone have been enough for researchers to differentiate their conception of what constitutes aggressive behavior, with some only including direct violent actions (Jenkins, 1996) while others specifically conscribing their definition to nonphysical behaviors such as swearing and insulting others (Keashly, 2001). Similarly, whereas some researchers specify the inclusion of both organizational insiders and outsiders (O'Leary-Kelly, Griffin, & Glew, 1996), others restrict the definition of workplace aggression to organizational insiders (Baron & Neuman, 1996). Finally, intentionality of the aggressive behavior has also been examined in the context of classifying workplace aggression. Workplace aggression definitions have also been known to be restricted towards only the inclusion of intentional acts against others within the organization (Baron & Neuman, 1996) while others allow ambiguous acts of aggression to be included (Andersson & Pearson, 1999).

Whereas such distinctions and specifications have led to a variety of conceptualizations regarding workplace aggression, distinguishing characteristics of

form, intent, perpetrator characteristic, and victim are often specified to produce very specific and supposedly unique sub facets within the workplace aggression domain. For example, perpetrator power has also been included when reflecting distinct forms of repetitive acts of low intensity aggressive behaviors of a specific perpetrator with higher status against a victim of lower status, known more commonly as bullying (Bjorkqvist, Osterman, & Hielt-Bdck, 1994; Bowling & Beehr, 2006; Einarsen & Skogstad, 1996). Incivility itself is often defined as deviant acts of low intensity of either verbal or non-verbal behavior against an organizational employee with ambiguous intent to harm (Andersson & Pearson, 1999). Finally, social undermining refers to behaviors between members of a group which is intended to hinder the victim's ability to establish or maintain positive interpersonal relationships, work success and reputation, resulting in feelings of distress on behalf of the victim and distrust of the perpetrator (Duffy, Ganster, & Pagon, 2002).

While it goes without saying that the profusion of research dedicated towards examining workplace aggression has provided us with a wealth of knowledge and insights, it is clear that a dire need for agreement of construct definition is needed. Although it is true that there are underlying differences in conceptualization of these aforementioned constructs, some researchers have claimed that they are not substantially different enough from one another (Aquino et. al, 2009; Hershcovis, 2011). In support of this, Aquino et al. (2009) claim that all of these constructs can be viewed as aversive and harmful to the intended target, thwarting the satisfaction of fundamental needs, such as self-esteem, sense of belonging, and/or a predictable environment.

In a comprehensive review of different mistreatment constructs, Hershcovis (2011) elucidated some of the main problems in what she referred to as a "fragmented field", including: significant overlap between items of different constructs, the overlap between the dimensions of the definitions of constructs themselves, and the assumption of outcomes certain constructs make within their definition, without actually measuring such. As an example of this, Hershcovis (2011) compared social undermining to bullying, arguing that while the definition of the former implies interference with success and social relationships, the items included in the measurement (e.g., 'gave you misleading information') overlaps significantly with other constructs such as bullying (e.g., 'Someone withholding information which affects your performance') and as such do not necessarily fall exclusively within the domain of social undermining. Furthermore, while social relationships are assumed to be affected, the degree to which they are is never actually measured (Hershcovis, 2011).

Given these claims it is easy to understand why despite the short time workplace aggression has been studied, calls for synthesis of constructs have been manifesting for the last decade - nearly half the time since research in this domain first proliferated. In the concluding thoughts of their book examining various types of constructs of workplace mistreatment, Spector and Fox (2005)[1] make the suggestion of construct integration by focusing on key terms and principles that they have in common, rather than attempting to highlight their uniqueness. Similarly, in their comparisons of conflict and workplace aggression literature, Raver and Barling (2008) reiterate the call to establish common terminology and measures in the study of workplace aggression. The importance in

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[1] Neuman & Baron 2005 also called for concept clarity and an integrating framework

synthesizing various constructs into an agreed upon framework goes beyond simplifying

the literature to preventing the impediment of theoretical development brought about as a

result of studying constructs with overlapping dimensions (Aquino & Thau, 2009). These

arguments for conciseness are so significant that certain researchers have already begun

empirical work using combinations of various mistreatment constructs under a unified

domain. In a meta-analysis of workplace harassment aimed at developing an attribution

and reciprocity-based model for the victim's perspective explaining the links between

workplace harassment and their potential antecedents and consequences, Bowling and

Beehr (2006) rationalized their construct amalgamation by claiming that each label of

workplace harassment was essentially referring to the same overarching construct.

Given these previous claims, it would be useful to empirically assess whether all

constructs relate to a common construct, that of workplace aggression, or not.

Conceptual Definition & Prevalence Estimates

Violence and Aggression.

Broadly speaking, all forms of workplace aggression can be categorized according

to three dichotomies (Buss, 1961): verbal—physical, direct—indirect, and active-passive

and can come from any individuals regardless of their membership to the organization

(i.e., both organizational outsiders & insiders). As such, I propose to use Schat &

Kelloway's (2005) definition in which workplace aggression is "behavior by an

individual or individuals within or outside an organization that is intended to physically

or psychologically harm a worker or workers and occurs in a work-related context" (p.

191). According to Schat & Kelloway, this definition is useful for three reasons. First, it

fits well within the general aggression literature. Second, the definition is broad enough to

include a wide range of physical and psychological behaviors, and, finally, it allows for both organizational outsiders as well as insiders as perpetrators. Although workplace violence and aggression is often used interchangeably in the literature, it is important to distinguish between both. Similar to other researchers (Kelloway et al., 2006a; Neuman & Baron, 1998; Schat & Kelloway, 2005) I propose that workplace violence is a subset of workplace aggression whereby the behaviors of perpetrators are intended to cause physical harm.

Although acts of violent behaviors can have profound consequences, they are much less prevalent than we are led to believe. While distinct instances of intense workplace violence such as murder are sensationalized in the media resulting in high perceptions of prevalence, prior research has shown that violent aggression accounts for only a small percentage of aggressive acts (Kelloway, Barling, & Hurrell, 2006b). In fact, using a representative sample of US workers, Schat, Frone & Kelloway (2006) estimated that only 6% of workers experienced acts of physical violence compared to 41.4% experiencing psychological acts of aggression. This survey confirms prior findings of verbal and passive forms of aggression being more prevalent within organizations compared to more physical and active forms of aggression (Baron & Neuman, 1996).

Given that workplace violence and aggression can also stem from organizational outsiders as well as insiders, it is important to examine the respective prevalence estimates by source as well. Using the same representative sample, Schat et al. (2006) found that 23.4% of respondents had experienced aggression within the last year from organizational outsiders (i.e., individuals who do not work at the organization), 15% from their co-workers, and 13.5% from employees with positions of power (i.e., supervisors or

bosses). In regards to exposure of violence incidents within the last year, 3.6% of

respondents had experienced public-initiated violence, while 0.8% and 0.4% had

experienced violence stemming from co-workers or employees with positions of power,

respectively.

In line with the definition and prevalence estimates outlined, I have selected six

existing constructs that attempt to best sample the broadness of workplace aggression.

These six constructs are: workplace violence, vicarious violence, verbal aggression,

incivility, sexual harassment, and bullying. Given that both workplace violence and

verbal/psychological aggression as conceptualized by Rogers & Kelloway (1997; see also

Schat & Kelloway, 2000) are broad indicators of the definition outlined above[2], they will

not be examined in further detail.

Incivility.

Incivility was first defined by Andersson and Pearson as general behavior that

reflects disregard for others in the workplace, which violate workplace norms of mutual

respect (1999). One of the main features of workplace incivility which attempts to

distinguish it from other forms of workplace aggression is the inherent ambiguousness

regarding the intent to harm, as perceived by the victim. In addition, incivility specifically

refers to behaviors of low intensity. This is different to other forms of mistreatment

constructs which often do not explicitly state the intensity (Hershcovis, 2011).

In a sample of nearly 800 US employees, 10% claimed to witness acts of incivility

on a daily basis, while 20% claimed to be direct targets at least once per week (Pearson &

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[2] These scales developed and used by Rogers & Kelloway (1997; see also Schat & Kelloway, 2000)
consequentially served as the measurement tools used for the prevalence rates of their representative
sample.

Porath, 2005). In a separate yet related study, a quarter of Canadian white-collar

employees reported witnessing incivility on a daily basis, while half reported being the

direct targets of incivility at least once per week (Pearson & Porath, 2005).

Bullying.

Bullying has been defined by Einarsen (1996) as, "repeated actions and practices

that are directed to one or more workers, which are unwanted by the victim, which may

be done deliberately or unconsciously, but clearly cause humiliation, offence and distress,

and that may interfere with job performance and/or cause an unpleasant working

environment" (p. 17). As Hershcovis (2011) points out in a brief analysis of the construct,

the key distinguishing feature of bullying is the persistent and sustained nature. Not

specifically included in the definition of bullying is the power imbalance between the

victim and the perpetrator (Hershcovis, 2011; Mikkelsen & Einarsen, 2001), in which the

perpetrator has more power than the victim, whether that be defined as formal power

(e.g., rank in an organization), social power, or any other psychosocial form of perceived

dominance.

Using a representative sample of 1,000 US employees, the Workplace Bullying

Institute and Zogby International were able to provide data on incident rates (Workplace

Bullying Institute & Zogby International, 2014). In their study, 27% of respondents

indicated having past or current experience with abusive conduct at work. In addition,

21% of respondents reported having witnessed incidents of workplace bullying. Finally,

more than half of all bullying incidents came from the top-down, further confirming the

nature of power as critical in bullying.

Sexual harassment.

Sexual harassment is one of the most common sources of aggression that women in the workplace face, and has long been identified by Fitzgerald (1988) as a critical barrier for career success and satisfaction for working women. Furthermore, sexual harassment claims often come at tremendous costs to the organization, appearing in the form of lawsuits, unwanted publicity, and litigations (Willness, Steel, & Lee, 2007). Although we may all have a notion of what constitutes sexual harassment in our minds, one of the biggest challenges remains to obtain an agreed upon definition (Fitzgerald, 1990). In an attempt to resolve this issue, Fitzgerald (1995) proposed that sexual harassment was composed of three dimensions: sexual coercion, unwanted sexual attention, and gender harassment. While sexual coercion refers to the extortion of sexual favors in return for job-related favors, gender harassment refers to verbal and nonverbal behaviors aimed at demeaning women. Examples of such behaviors include, but are not limited to, taunts, slurs, and gestures (Fitzgerald, 1995). Finally, unwanted sexual attention is unambiguous in its meaning, and refers to sexual advances that have been unsolicited by the victim. As such, sexual harassment was defined by Fitzgerald (1997) as "unwanted sex-related behavior at work that is appraised by the recipient as offensive, exceeding her resources, or threatening her well-being" (p. 15).

While prevalence estimates are often difficult to determine (Lengnick-Hall, 1995), a meta-analysis of sexual harassment in the US using 55 samples consisting of a total of more than 86,000 respondents have found that 58% of women have experienced sexual harassment and nearly a quarter of them having experienced such harassment at work (Ilies, Hauserman, Schwochau, & Stibal, 2003). While methodological issues causing discrepancies in sexual harassment should be kept in mind (Lengnick-Hall, 1995), general

prevalence estimates suggest that sexual harassment is a widespread issue that cannot be ignored.

Workplace Harassment Factor Structure

As previously iterated, there are many claims that various forms of workplace mistreatment and their discrepant definitions are all alluding to the same overarching construct (Aquino & Lamertz, 2004; Bowling & Beehr, 2006; Hershcovis, 2011; Lapierre et al., 2005). In order to determine whether or not this claim is valid, I propose and test three different models of workplace aggression.

Model 1: All constructs are the same.

In providing evidence for the importance in reconciling constructs within workplace aggression research, Hershcovis (2011) analyzed five sample constructs (i.e., abusive supervision, bullying, incivility, social undermining, and interpersonal conflict) and argued that the differentiation of these constructs fails to add to our knowledge of workplace aggression. In support of her argument, Hershcovis identified five overlapping and differentiating characteristics of her mistreatment constructs: (1) Intensity, (2) frequency, (3) perpetrator power/position, (4) outcomes to be affected, and (5) intent. Hershcovis claimed that while each construct could be conceptually differentiated from each other, they did so as a result of assumptions of definition and conceptualization (i.e., differences in persistence, power, intent, intensity). Regardless of this notion, researchers have failed to measure these differentiating factors (Hershcovis, 2011). In confirmation of this claim, meta-analytic evidence showed no predictable pattern of outcomes from the resulting constructs analyzed, with every construct having similar implications on various known outcomes of workplace aggression (Hershcovis, 2011).

Given such claims it is easy to understand the sustained calls for unification within the workplace aggression literature. The aim of every academic domain is to further knowledge within the field by building upon the years of fruitful research and discoveries of others. Yet, if the fragmentation of workplace aggression into many distinct constructs fails to provide critical insights, then we essentially waste our time and resources repeating the discoveries of others. As such the first model we propose will be testing Hershcovis' theory in which every scale and subscale included (i.e., verbal aggression, workplace violence \ vicarious violence, sexual harassment, bullying, and incivility) converge into one overarching factor (see Figure 1).
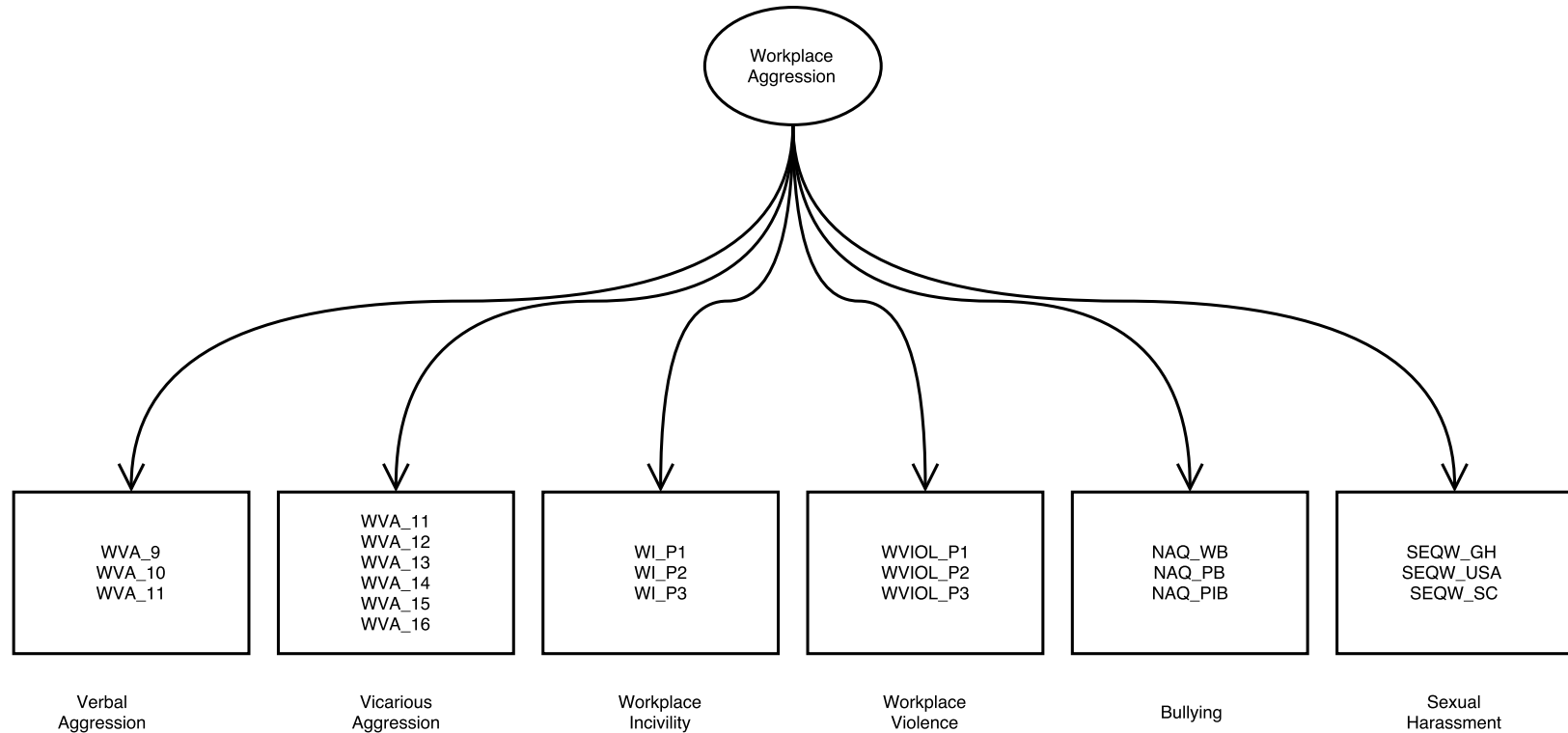
Figure 1. The hypothesized one-factor model of workplace aggression. All six latent constructs are comprised of between three to six items or parcels forming the latent construct's respective indicators. In the one-factor model, all latent variables are hypothesized to load into a single global construct of workplace aggression.

Model 2: Two distinct factors.

While all forms of workplace mistreatment included in this study can be viewed as forms of aggression, sexual harassment is unique in that it is seen as targeting a specific group of the population. As such, effects of victimization for sexual harassment may be different than other forms of workplace mistreatment. Using attribution theory, Hershcovis and Barling (2010) theorized that victims of workplace aggression and sexual harassment would make different attributions about their mistreatment, with victims of sexual harassment depersonalizing their mistreatment by externalizing the aggression to their gender, whereas victims of other forms of workplace aggression would personalize the mistreatment by making internal attributions. Results from their study not only confirmed their hypothesis, but further showed that negative attitudinal, behavioral, and health outcomes were stronger in magnitude for workplace aggression compared to sexual harassment, most likely the result of different attributions (Hershcovis & Barling, 2010).

This research provides significant evidence for the necessity of conceptualizing sexual harassment as distinct from other forms of workplace mistreatment. As such, model 2 will hypothesize two separate factors, with sexual harassment loading on its own unique factor while all other forms of mistreatment included in this study load on the second factor (see Figure 2). It is important to note that both factors will essentially constitute forms of aggression. As such, while both factors will be distinct, I do expect the factors to be correlated.
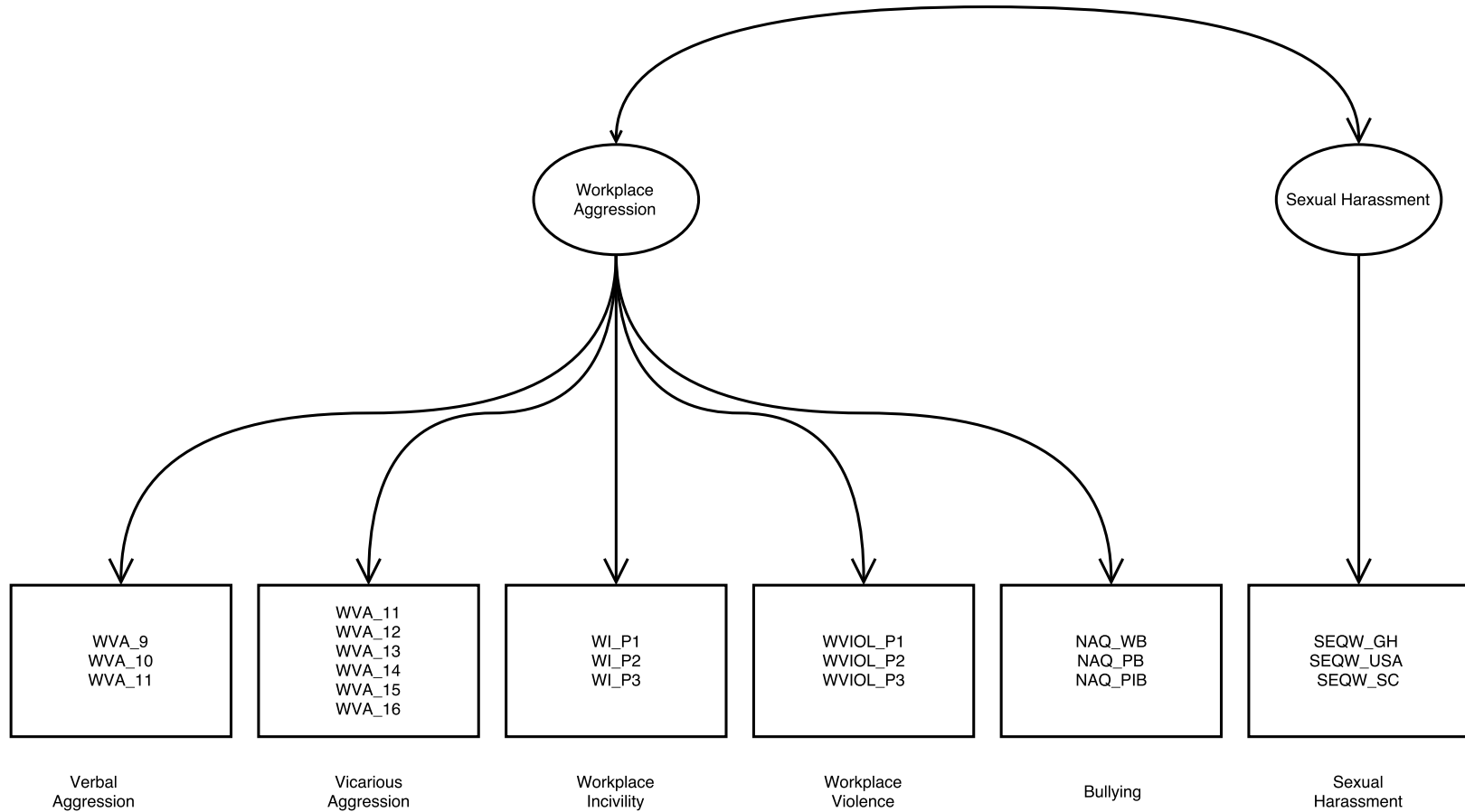
Figure 2. The hypothesized two-factor model of workplace aggression. In the two-factor model, all latent variables, but sexual harassment load onto a single global construct of workplace aggression, whereas sexual harassment is empirically distinguishable, loading onto its own separate factor.

Model 3: All constructs are unique.

While there is good theoretical evidence for the convergence of constructs within the workplace aggression literature, each of the constructs analyzed here were initially formed by ensuring conceptual differentiation from other extant constructs. As such, it is important to verify whether each distinct form of workplace mistreatment included in this study is indeed unique. For this, I propose a third model with six distinct factors (see Figure 3). However, as each construct represent a specific form of workplace mistreatment, I hypothesize that the factors are intercorrelated.

The Current Study

All of these models were tested using confirmatory factor analysis (CFA) techniques. In support of the numerous arguments for an integrative construct of workplace aggression (see Neuman & Baron, 2005; Raver & Barling, 2008; Spector & Fox, 2005) and the empirical evidence put forth by Hershcovis (2011) underlining the lack of distinguishable outcomes of the various extant constructs, I hypothesized that the one-factor model of workplace aggression will provide the best fit to the data. In other words, I hypothesized that verbal aggression, workplace violence, vicarious violence, sexual harassment, workplace incivility, and bullying, will all be sufficiently related to each other such that they all refer to a singular global construct of workplace aggression.
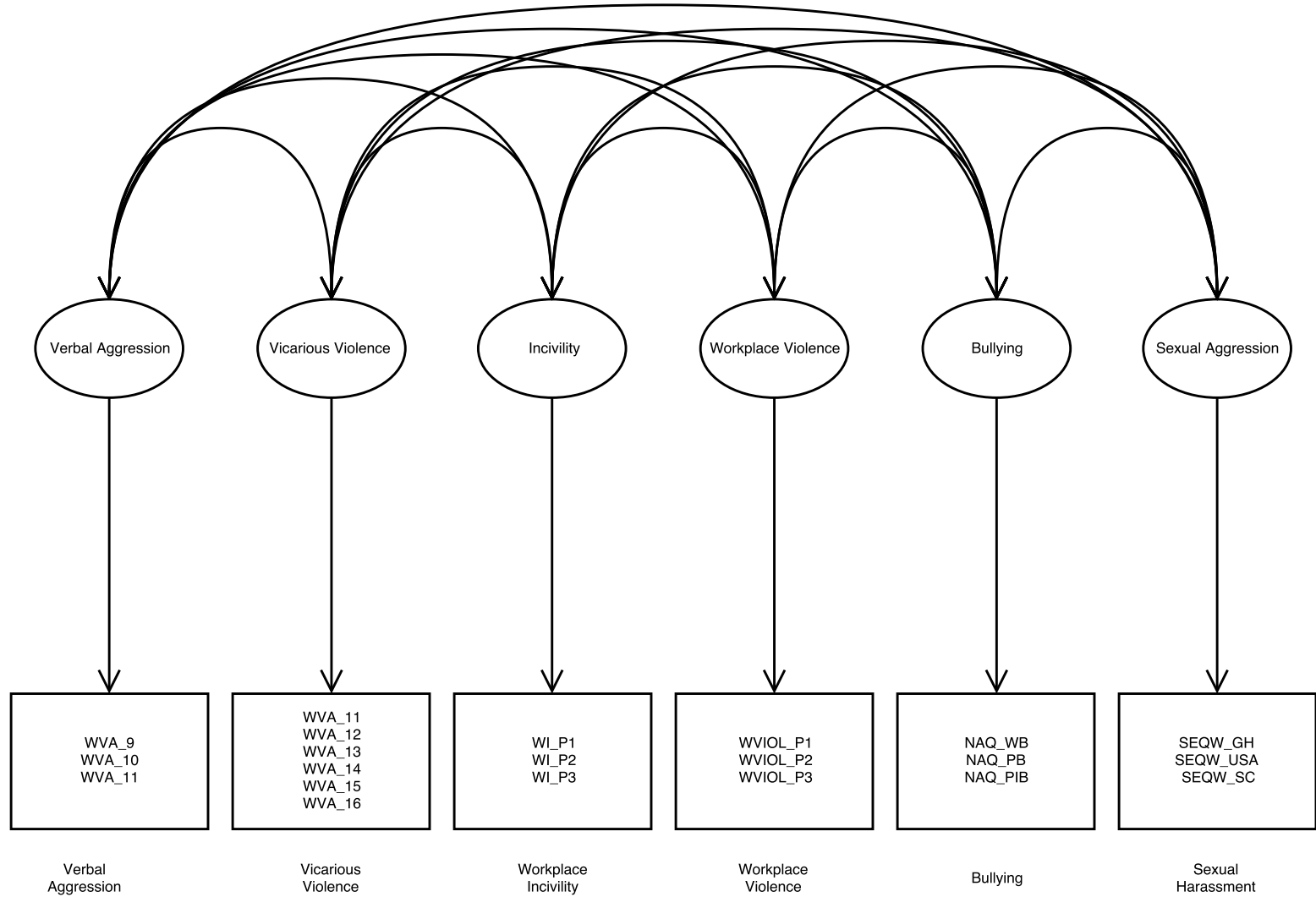
Figure 3. The six-factor model of workplace aggression. In the six-factor model, all latent variables are empirically distinguishable, loading onto their own separate factors.

Part 2: The Buffering Effects of Violence Prevention Climate on the Negative

Consequences of Workplace Aggression

Workplace aggression has substantial negative effects at both the individual and organizational level (Rogers & Kelloway, 1997). Prior research has associated exposure to workplace aggression with psychological (e.g., anxiety, depression, self-confidence, burnout, frustration, and psychological well-being; Bowling & Beehr, 2006; Hershcovis, 2011; Hershcovis & Barling, 2010; Vartia, 2001), physical (e.g., sleep disturbances, ambulatory blood pressure, and musculoskeletal injury; Niedhammer, David, Degioanni, Drummond, & Philip, 2009; Spector et al., 2007; Wager, Fieldman, & Hussey, 2003; Zhou, Yang, & Spector, 2015), behavioral (e.g., counterproductive work behaviors, and revenge-seeking Bies & Tripp, 2005; Bowling & Beehr, 2006) and organizational outcomes (e.g., absenteeism, voluntary turnover, job neglect, and job performance; Barling, Rogers, & Kelloway, 2001; Eisenberger, Fasolo, & Davis-LaMastro, 1990; LeBlanc & Kelloway, 2002; Rogers & Kelloway, 1997; Schat & Kelloway, 2000). To make matters worse, one does not need to be a direct victim of workplace aggression to exhibit negative effects. Research by Hall and Spector (1991) provided evidence for a relationship between perceived dangerousness and psychological symptoms. Subsequent studies further confirmed that vicarious exposure to violence directly predicted fear of workplace aggression which itself predicted somatic and emotional well-being, including organizational outcomes such as turnover intent (Rogers & Kelloway, 1997; Schat & Kelloway, 2000).

The adverse effects of workplace aggression can best be understood from an occupational stress framework perspective which posits a stressor-strain-stress process of

negative outcomes (Cooper, Dewe, & O'Driscoll, 2001; Jex & Beehr, 1991). According

to Spector & Jex (1998), stressors are aversive environmental stimuli requiring an

adaptive response. Stress on the other hand, refers to the immediate psychological

appraisal and response to the stressor. Finally, strain is the subsequent consequences

resulting from the adaptive responses to the environment. Understood in this light,

instances of workplace aggression reflect the stressor within the workplace, while

immediate appraisal and psychological reaction (e.g., increased fear, negative affect, and

anxiety) indicate stress, eventually resulting in medium to long-term ramifications

(psychological well-being, physical symptoms, etc) demonstrating strain. As elucidated

by Schat & Kelloway (2005), this model is useful for the study of workplace aggression

for three main reasons: (1) the model has been widely used in the work stress literature in

the past, (2) it effectively distinguishes between an act of workplace aggression and the

appraisal and reaction to the event, and (3) it allows for the inclusion of moderating and

mediating factors.

The models of workplace aggression suggested within the occupation stress

framework benefits from strong empirical support. As evidence, Rogers and Kelloway

(1997) found that exposure to workplace violence (both direct and indirect forms)

significantly predicted fear of future violence which in turn, predicted negative outcomes

including psychological well-being, somatic symptoms, and negative outcomes. An

additional analysis of workplace violence and aggression not only replicated the previous

results, but further showed a mediating effect of psychological well-being on the

relationship between fear of future violence and somatic health and organizational

outcomes (e.g., turnover intent and neglect; Schat & Kelloway, 2000). These results were

in line with prior research underlining the physical manifestation resulting from psychological functioning (Rogers & Kelloway, 1997). The mechanisms behind which fear affects psychological well-being can best be understood by first examining how workplace aggression predicts fear.

According to Schat and Kelloway (2005), "Fear of future workplace aggression constitutes a combined affective and cognitive reaction to experiencing an act of workplace aggression in which an individual perceives an increased vulnerability to experiencing other aggressive acts in the future" (p. 202). In effect, workplace aggression has been shown to significantly predict individuals' perceived likelihood of future violence which in turn predicted fear of future violence (LeBlanc & Kelloway, 2002). The resulting effect of stress (i.e., fear of future violence) predicts negative psychological well-being, which in turn result in somatic symptoms and organizational consequences (Rogers & Kelloway, 1997; Schat & Kelloway, 2000; 2003).

Despite these negative implications for individuals and organizations, reducing the occurrence of violence and aggression at work has not been an easy task. Whereas the state & federal government of Canada has now introduced considerable legislature regarding the occurrence of workplace aggression, organizational policies often remain ineffective, being based on many popular myths concerning workplace aggression (see Barling, Dupre, & Kelloway, 2009). To complicate matters further, the inconspicuous nature of intra-organizational aggression has made it hard to detect instances of workplace aggression from organizational insiders in many cases (e.g., other employees; Baron & Neuman, 1996). Finally, research has shown that while workplace violence and aggression can be perpetrated by both organizational insiders (i.e., co-workers) and

outsiders (i.e., clients and criminals), external members of the organization are primary

perpetrators (Barling, Dupré, & Kelloway, 2009; LeBlanc & Kelloway, 2002; Sygnatur &

Toscano, 2000). This risk of workplace violence is dependent on specific factors related

to occupational characteristics of the victim (LeBlanc & Kelloway, 2002). For example,

those who deal with the public, handle items of value, provide care to intoxicated

individuals, or often deny services, are at increased risk for workplace violence. Given

that the few extant organizational policies typically focused on current employees, they

are unlikely to mitigate these risks or to reduce such incidence of workplace violence and

aggression (Kelloway, Calnan, Mullen, & Teed, 2013).

Validation of the Workplace Harassment Model Within the Occupational

Stress Framework.

Given the aforementioned empirical evidence outlined above, the second part of

this thesis will attempt to replicate the general model of workplace aggression and its

consequences within the occupational stress framework. As such, this model posits that

risk of workplace violence and aggression will positively predict instances of aggression

(conceptualized by the constructs obtained from the confirmatory factor analysis in part

I), which will in turn positively predict fear. Finally, fear was expected to negatively

predict psychological well-being (see figure 4). The inclusion of psychological well-being

above other outcomes was related in part to the important implications of psychological

health in predicting both somatic and organizational outcomes (see Schat & Kelloway,

2000).

In addition to the fully mediated model above, both a non-mediated and partially

mediated model were also tested. The partially mediated model of workplace violence

and aggression contained all paths in the fully mediated model, as well as direct paths

from each construct of workplace aggression to psychological well-being. The non

mediated model had direct paths from each construct of workplace agression to both fear

and psychological well-being, but no direct path from fear to psychological well-being.

As these models are nested, direct model comparisons were made using chi-square

difference test (see Kelloway, 2015). Given the previous empirical evidence, I predicted

that the fully-mediated model of workplace aggression would provide the best fit to the

data.
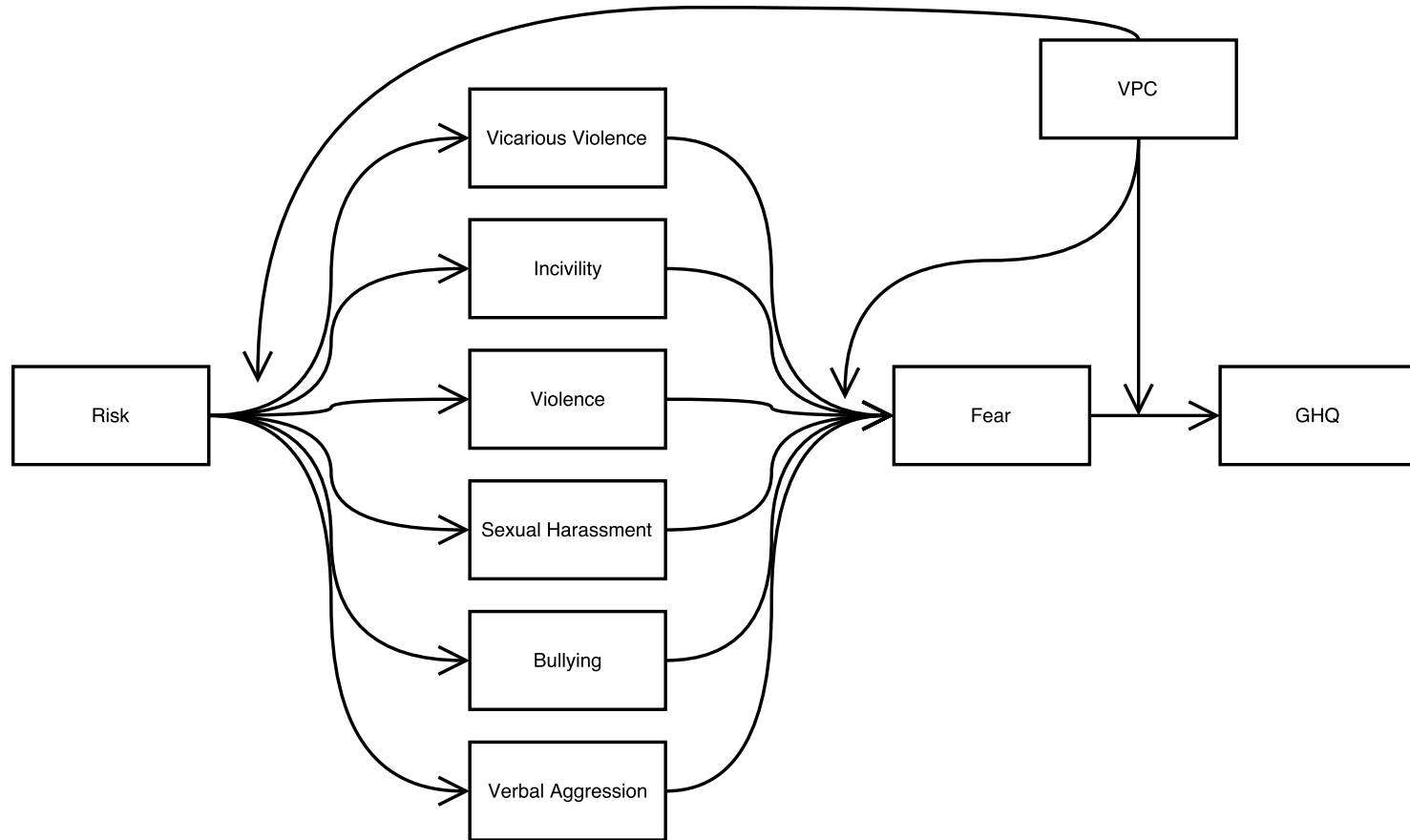
Figure 4. The occupational stress model of workplace aggression. Violence Prevention Climate (VPC) is hypothesized to moderate the links between risk and aggression, aggression and fear, and fear and psychological well-being.

Workplace Aggression and Violence Prevention Climate

While it may seem that the reduction of workplace aggression is an insurmountable task, preliminary evidence suggests that psychological climate may play a significant role in achieving these goals.

Notion of climate.

Before examining the notion and influence of climate, it is important to briefly distinguish it from that of organizational culture. While both culture and climate are associated with the psychological environment, they are so in different yet related ways. While climate is strongly related to the current situation and its relation to perceptions and behaviors of employees (Ostroff, Kinicki, & Tamkins, 2003), culture refers more to fundamental ideologies which are deeply ingrained in historical context, helping to guide and explain why things happen (Ostroff et al., 2003; Schein, 2000; Schneider, 2000). As such, climate perceptions are more immediate, temporal, and subjective, lending itself more readily to manipulation than culture (Dennison, 1996; see Ostroff et al., 2003 for review).

In general, psychological climate refers to employees' individual perceptions and attitudes about the work environment (James & Jones, 1974; Schneider & Hall, 1972). These evaluations can refer to general (e.g., roles, communication), or specific (e.g., safety or customer support) dimensions of the environment. While psychological climate is conceptualized at the individual level, climate perceptions can also be assessed at the

aggregate-level[3] (Zohar, 2014; Zohar & Luria, 2005; see Schneider & Hall, 1972). The

meaning individuals attribute to their organizational context based on the values

accentuated by the organization is believed to motivate adherence (Brown & Leigh,

1996). For example, safety climate, one of the most extensively studied climate

perceptions in the literature, can be defined as shared perceptions of organizational

members regarding safety policies, procedures, and practices (Zohar, 2014). By

definition, a strong safety climate within an organization would be reflected by

perceptions of salient and robust safety policies and procedures, along with managerial

support and priority for compliance. As such, we would expect such strong perceptions of

safety climate to be related to employee motivations for safety. In effect, the literature

confirms this notion with safety climate positively predicting safety compliance

(McDiarmid & Condon, 2005) and safety related outcomes such as reduced injury

(Huang, Ho, Smith, & Chen, 2006).

Borrowing from safety climate, Spector and colleagues (2007) theorized that

violence prevention climate, defined as employees' evaluation of policies, procedures and

practices aimed at reducing workplace violence and aggression, would have beneficial

effects on both reducing the occurrence of workplace aggression, as well as identifying

and removing risk factors conducive towards aggression. In substantiation of their theory,

Spector drew from past research underlying that while abusive social environments which

tolerate violence lead to increased organizational violence (O'Leary-Kelly et al., 1996)

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[3] Aggregate level climate perceptions are generally referred to as, "organizational climate" (Schneider &

Hall, 1972).

supportive work environments help to stifle violence (Schat & Kelloway, 2003; Van

Emmerik, Euwema, & Bakker, 2007). As predicted, perceptions of organizational

violence prevention climate were associated with lower incidence of workplace violence

and aggression in a sample of 198 nurses (Spector et al., 2007).

Mechanisms behind violence prevention climate.

As a result of the initial positive findings concerning violence prevention climate,

Kessler, Spector, Chang, & Parr (2008) extended the development of the scale into a

three-dimensional construct to reflect policies, practices, and pressure for unsafe

practices. Whereas polices refer to employee awareness of organizational rules and

regulations concerning workplace aggression prevention, practices reflect the actual

adherence of management to the aforementioned policies including their responses to

incidents of workplace aggression. Finally, while both policies and practice represent

favorable climate perceptions, pressure for unsafe practices reflect the extent to which

organizational norms encourage ignoring prevention practices for the sake of production

(Kessler et al., 2008).

According to Chang, Eatough, Spector and Kessler (2011), violence prevention

climate, as currently operationalized, works to ameliorate the occurrence and negative

ramifications of workplace aggression in a multitude of ways. To begin, Chang and

colleagues extend the work on general employee performance (Borman, 2004) and safety

performance (Neal et al., 2000) to conceptualize violence prevention climate as a

performance dimension composed of two components targeting specific hazards (i.e.,

workplace aggression). One such component of the performance dimension elicited by

violence prevention climate refers to prevention participation – prevention behaviors

above and beyond those normally required by the organization which strive to enhance the general environment for preventing workplace aggression (Chang et al., 2012). Drawing from the transactional model of stress (i.e., the stress-stressor-strain model; Lazarus & Folkman, 1984), poor violence prevention climate perceptions can be seen as an acute stressor (Chang, Eatough, Spector, & Kessler, 2012; Kessler et al., 2008; Spector et al., 2007) which elicits emotional strains, serving to deplete cognitive resources. This in turn results in a reduction in motivation and performance behaviors through lack of self-regulation (Chang, Rosen, & Levy, 2009). As such, when employees perceive a poor violence prevention climate within the organization, the resulting reduction in performance for prevention behaviors may result in increased exposure to workplace violence (Chang et al., 2012). Given that exposure to workplace aggression itself results in strain, the employee could become trapped in a vicious cycle in which poor prevention behaviors lead to increased exposure to workplace violence which leads to even lower prevention participation (Chang et al., 2012). Conversely, increased violence prevention climate has been shown to be related to increased performance in prevention participation (Chang et al., 2012). Subsequent increases in preventative behaviors should consequentially be linked towards reduced exposure to workplace aggression. Given that certain organizations have inherent risk factors for workplace aggression, violence prevention climate could moderate the link between risk for aggression and subsequent exposure, thus forming my first hypothesis:

Hypothesis 1: Violence prevention climate will moderate the link between risk for violence and aggression and subsequent exposure.

The second performance dimension related to violence prevention climate is prevention compliance – behaviors defined as performing core activities stipulated by the organization for preventing and managing workplace aggression. The extent to which an organization has and upholds policies regarding the handling of workplace aggression is beneficial for several reasons. To begin, as Chang and colleagues (2012) note, a lack of organizational policy may result in ambiguity in preventing and responding to aggression on behalf of the employees. Additionally, a general lack of response by the organization in response to incidents of workplace aggression can result in employee perceptions of a hostile and callous environment. This is turn may place additional stress upon the employee, in addition to those resulting from potential incidents of aggression (Hemingway & Smith, 1999; Siu, Phillips, & Leung, 2004). Whereas a lack of organizational policy may result in increased stress, a prevalence of organizational policy has the opposite effect. According to the expectancy theory (Vroom, 1964), clearly defined policies and responsive supervisors to instances of workplace aggression may help to increase the perceived linkages between prevention compliance and positive outcomes (Chang et al., 2012), resulting in enhanced motivation for these behaviors. This in turn results in employees placing a higher priority on prevention compliance as they view such behaviors as high priority, even when faced with multiple and potentially conflicting work goals. Not only does this allow them to effectively manage exposure to aggressive behaviors when it occurs, it subsequently allows them to maintain belief that their preventative behaviors will reduce the risk, and hence fear, of future violence. In addition, organizational training in responding to incidents of workplace aggression is

shown to be related to perceptions of control, which itself was proven to have direct

effects on reducing fear of future violence and enhancing emotional well-being (Schat &

Kelloway, 2000). Given that fear of future violence mediates the relationship between

workplace aggression and psychological well-being, and that violence prevention climate

is theorized to reduce the links between violence and fear as well as fear and emotional

well-being, I hypothesize a moderated mediation such that the mediation effect of fear of

future violence is moderated by violence prevention climate perceptions.

Hypothesis 2: There is a moderated mediation such that the mediation of fear of

future violence on the link between workplace aggression and psychological well-being,

is moderated by violence prevention climate perceptions. In other words, violence

prevention climate will moderate the link between workplace aggression and fear

(hypothesis 2a), as well as between fear and psychological well-being (hypothesis 2b).

It is important to note that while violence-prevention climate can theoretically be

conceptualized at the aggregate-level, assessing shared perceptions of climate, I have

constrained prevention perceptions to be measured at the individual level within this

study. As such, my hypotheses and subsequent results relate only to individual

perceptions of prevention climate.

Methodology

Participants

I recruited participants through a survey panel maintained by Qualtrics. To be

eligible for recruitment, participants had to be working full-time (i.e., at least 30 hours a

week) and reside in North America. In total, 315 participants constituting a wide range of occupations were recruited. Of the respondents 42% were female and 58% were male. Participants' age ranged from 18 to 73 with a mean age of 38.26 (SD = 11.75). On average, participants had been working at the organization for 8.40 years (SD = 8.05).

Measures and Procedures

All participants who showed interested in the study and fit the aforementioned requirements were subsequently given a unique link to the online questionnaire. Before participants could respond to any questions, they were presented with a consent form detailing the nature and risks of the study. All participants were informed that their participation was entirely voluntary and that they were not obliged to answer any questions they felt uncomfortable answering, and could stop their participation at any time. Only participants who agreed to the terms and conditions laid out in the consent form were allowed to proceed to the questionnaires. With the exception of the consent form, all the questionnaires were randomized between participants to avoid potential bias effects of cognitive fatigue. Upon completion of the questionnaires, participants were provided with a debriefing form thanking them for their time and informing them about the exact nature of the study and hypotheses. Respondents were subsequently paid by Qualtrics for their participation.

In total, 5 attention checks were included throughout the survey in order to ensure a high quality of responses. The attention checks were comprised of questions asking participants to select a specific pre-defined answers throughout the questionnaires (e.g., "Please select the highest point on the scale"), and was used as a way to detect random

responses within the survey. Participants who failed any attention checks were not included. In addition to the attention checks, the questionnaire included measures of:

Workplace violence & aggression.

Exposure to workplace violence and aggression was assessed using a 16-item scale first developed by Rogers & Kelloway (1997), consisting of examples of physical violence (e.g., "Have you been spat on or bitten by anyone while you've been at work?"), psychological aggression ("Have you been yelled at or shouted at while you've been at work?"), and vicarious violence at work ("Have you heard about any of your co-workers/managers experiencing violent events at work?") Respondents were asked to report the extent to which they experienced the items in the scale, regardless of the source (e.g., customers, clients, or other employees), over the last 12 months. Items were rated using a 5-point scale from 1 (*never*) to 5 (*5 or more times*). Participant scores were determined by averaging across items with higher scores indicating stronger exposure to workplace violence and aggression. The internal scale reliability assessed using Cronbach's alpha showed adequate reliability for physical violence ($\alpha = .87$), psychological aggression ($\alpha = .88$), and vicarious violence ($\alpha = .89$).

Fear of violence scale.

Fear of future violence was assessed using a 5-item scale developed by Rogers & Kelloway (1997). The items were related to the Violence at Work and the Likelihood of Experiencing Future Violence at Work Scales (e.g., "In the next twelve months I am afraid that I will be hit, kicked, grabbed, shoved or pushed by anyone while at work"). All items were rated on a 5-point scale from 1 (*never*) to 5 (*always*). Scale totals were calculated by averaging across items, with higher scores indicating higher fear of future

workplace violence & aggression. The scale demonstrated excellent internal reliability (α = .96).

Workplace incivility.

Exposure to workplace incivility was assessed using Cortina's (2001) 11-item Workplace Incivility (WI) scale. In responding to the scale, participants were asked how often they had been in a situation where their supervisor/coworker carried out acts of incivility against them (e.g., "Have you been in a situation where your supervisor/co-workers doubted your judgment in a matter over which you have responsibility") over the last year. Responses to items were measured on a 5-point scale from 1 (*once or twice a year*) to 5 (*everyday*), with total scores calculated by averaging across items. Higher scores on the incivility scale indicated stronger and/or more frequent exposure to workplace incivility. Analysis of internal reliability showed this scale to be highly reliable (α = .96).

Sexual experiences questionnaire.

Exposure to sexual harassment was assessed by using Fitzgerald and colleague's (1995) Sexual Experiences Questionnaire (SEQ). This scale was comprised of 17 items and required the participants to indicate the extent to which they were in a situation where a supervisor or coworker sexually harassed them over the last year. The scale was composed of three distinct (yet related) subscales assessing different dimensions of sexual harassment based on the underlying theory brought forth by Fitzgerald (1995): gender harassment ("Have you ever been in a situation where a supervisor or coworker told suggestive stories"), unwanted sexual attention ("Have you ever been in a situation where a supervisor or coworker attempted to discuss sex"), and sexual coercion ("Have you ever

been in a situation where a supervisor or coworker made you afraid of poor treatment if

you didn't cooperate"). All items were rated on a 5-point scale from 1 (*never*) to 5 (*more*

than 4 times (frequently)). The total score calculated by averaging across items, with

higher scores indicating more frequent and/or stronger exposure to sexual harassment.

Cronbach's alpha showed adequate reliability for Gender Harassment (α = .87),

Unwanted Sexual Attention (α = .88), and Sexual Coercion (α = .89).

Negative acts questionnaire.

The Negative Acts Questionnaire (NAQ) developed by Einarsen, Hoel, &

Notelaers (2009) was used to evaluate participants' exposure to bullying. The scale was

comprised of 22 items requiring respondents to self-report the frequency to which they

were exposed to specific negative acts at work over the last 12 months. The scale was

subdivided into three distinct (yet related) dimensions of workplace bullying according to

theory developed by Einarsen and colleagues (2009): work-related bullying (e.g.,

"Someone withholding information which affects your performance), person-related

bullying (e.g., "Spreading of gossip and rumors about you"), and physically intimidating

bullying (e.g., "Threats of violence or physical abuse or actual abuse"). All items were

scored on a 5-point scale from 1 (*never*) to 5 (*daily*). Scale total scores were calculated by

averaging across items, with higher scores indicating stronger and/or more frequent

exposure to workplace bullying. Cronbach's alpha showed good internal consistency for

Work-Related Bullying (α = .89), Person-Related Bullying (α = .95), and Physically

Intimidating Behavior (α = .79).

Violence prevention climate.

Employee perceptions of violence prevention within the organization was assessed using Kessler et al.'s (2008) Violence Prevention Climate Scale (VPCS). This scale was comprised of 18 statements of violence prevention climate and required participants to rate the extent to which they agreed with each of the following on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale was composed of 3 distinct (yet related) subscales assessing different dimensions of violence prevention climate: practices & response (e.g., "Management in this organization quickly responds to episodes of violence"), policies & procedures (e.g., "In my unit, employees are informed about potential violence hazards"), and pressure for unsafe practices (e.g., "In my unit, violence prevention policies and procedures are ignored"). Items relating to the pressure for unsafe practices dimension were reverse coded, such that high scores on the subscale meant lower perceived pressure. Higher scores on the scale indicated higher overall perceptions of violence prevention climate perceptions at the individual level (see Kessler et al., 2008). Cronbach's alpha showed good scale reliability for Practices & Response (α = .94), Policies & Procedures (α = .95), and Pressure for Unsafe Practices (α = .93).

Risk for violence.

Participant's risk for workplace violence and aggression was measured using LeBlanc & Kelloway's (2002) Risk for Workplace Violence scale. The scale consisted of 22 items designed to evaluate the extent to which respondents' job characteristics were predictive of workplace aggression (e.g., In your present employment how often are you in a position to interact with frustrated individuals; see LeBlanc & Kelloway, 2002). Items were scored on a 5-point scale from 1 (*never*) to 5 (*always*). Participants' total score was calculated by averaging across items, with higher scores indicating higher risks for

exposure to workplace violence and aggression. Cronbach's alpha indicated high internal reliability for this scale ($\alpha = .91$).

General health questionnaire.

Participant's psychological well-being was assessed using Banks' (1980) General Health Questionnaire (GHQ). The scale was comprised of 12 items assessing whether respondents had experienced a particular symptom or item of behavior over the last year (e.g., "In the last year, have you recently been able to concentrate on whatever you're doing?") Each item was scored on a 5-point scale from 1 (*much worse/more than usual*) to 5 (*better/healthier than normal*). Scale total scores were calculated by averaging across items, with higher scores indicating a higher level of well-being relative to lower scores. The scale demonstrated great internal reliability ($\alpha = .90$).

Results

All descriptive statistics and correlations can be found in table 1.

In order to empirically test the factor structure of the three proposed measurement models, a confirmatory factor analysis (CFA) was conducting using R (R Core Team, 2016). The three models analyzed were the hypothesized one-factor model with every construct loading onto a single factor, to an alternative two-factor model where every construct but sexual harassment load onto one factor while sexual harassment loads onto a separate yet correlated factor. Finally, the current six-factor model, in which the six latent constructs remain empirically distinguishable, was also compared to the one and two-factor models. Model fit was assessed using a combination of fit indices including: Chi Square Test (χ^2; significant values indicate poor model fit), Comparative Fit Index (CFI; Values above .95 indicate good model fit, while those above .90 are considered

acceptable; Hu & Bentler, 1999; Bentler & Bonett 1980), Root Mean Square Error of

Approximation (RMSEA; Values below .06 indicate good model fit; Steiger & Lind,

1980), and Tucker and Lewis Index (TLI; Values above .95 indicate good model fit,

while those above .90 are considered acceptable; Hu & Bentler, 1999; Bentler & Bonett

1980). All model tests were based on the covariance matrix.

Table 1

Descriptive Statistics and Zero-Order Correlations

Variables[4]	N	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	311	1.77	0.66	0.91															
2	314	1.59	0.94	.172**	0.87														
3	314	1.26	0.62	.227**	.657**	0.88													
4	314	1.16	0.52	.229**	.417**	.596**	0.89												
5	310	1.84	0.86	.221**	.450**	.396**	.463**	0.89											
6	309	1.44	0.72	.225**	.464**	.556**	.615**	.734**	0.95										
7	308	1.30	0.65	.364**	.406**	.452**	.487**	.593**	.764**	0.79									
8	258	1.62	0.87	.251**	.293**	.311**	.509**	.654**	.685**	.593**	0.96								
9	313	1.15	0.41	.441**	.313**	.345**	.481**	.335**	.382**	.490**	.322**	0.87							
10	313	1.99	1.27	.263**	.405**	.262**	.264**	.450**	.424**	.426**	.321**	.504**	0.88						
11	312	1.44	0.86	.345**	.343**	.207**	.168**	.320**	.309**	.372**	.264**	.573**	.629**	0.89					
12	313	1.17	0.51	.453**	.260**	.265**	.323**	.306**	.272**	.406**	.362**	.620**	.374**	.500**	0.96				
13	315	3.06	0.63	.124*	-0.095	-0.092	-.169**	-.291**	-.252**	-0.097	-.234**	0.038	-.180**	-0.026	-0.015	0.9			
14	304	3.31	1.26	0.108	-.263**	-.203**	-.205**	-.303**	-.287**	-.176**	-.152*	-0.055	-.167**	-0.037	-0.018	.136*	0.93		
15	313	4.15	0.99	-0.033	-.266**	-.283**	-.284**	-.380**	-.437**	-.390**	-.320**	-.230**	-.199**	-.206**	-.189**	0.109	.567**	0.95	
16	309	3.83	1.14	-.347**	-.180**	-.174**	-.176**	-.260**	-.209**	-.246**	-.263**	-.273**	-.165**	-.195**	-.303**	-0.072	-0.072	.325**	0.94

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[4] 1 - Risk for Violence; 2 – Gender Harassment; 3 – Unwanted Sexual Attention; 4 – Sexual Coercion; 5 – Work-Related Bullying; 6 – Person-Related Bullying; 7 – Physically Intimidating Behavior; 8 – Incivility; 9 – Physical Violence; 10 – Verbal Aggression; 11 – Vicarious Violence; 12 – Fear of Future Violence; 13 – General Health; 14 – Policies and Procedures; 15 – Practices and Responses; 16 – Pressure for Unsafe Practices.

Prior to conducting any tests, the data were examined. Presence of multivariate outliers were assessed but not detected in my sample, as Cook's distance values for all cases fell well below the generally accepted cutoff of 1 (Tabachnick & Fidell, 2013). Given that Mardia's test indicated potential violation of multivariate normality, all models were estimated using maximum likelihood estimation with robust (Huber-White) standard errors in order to account for potential biases.

As a result of the amount of latent variable indicators (i.e., items) within the measurement model, coupled with the restricted sample size, parceling techniques were utilized following Little, Cunningham, Shahar, and Widaman (2002) as well as Matsunaga's (2008) recommendations. Item parceling techniques have many benefits, including the ability to reduce type I error and increase estimation stability, among other psychometric and modeling benefits, without increasing biases (see Little et al., 2002; Matsunaga, 2008). All latent variables measured by multidimensional scales had items parceled according to each subscale (i.e., all items referring to a particular dimension of the construct formed one parcel). Both sexual harassment and bullying indicators were parceled in this manner. As both workplace incivility and workplace violence were not multidimensional, factorial algorithm methods of item parceling were used (Rogers & Schmitt, 2004), which consisted of conducting a factor loading on the items representing the construct and parceling them in such a way that the factor loadings were evenly spread across parcels. Finally, both verbal aggression and vicarious violence used all items representing the construct as indicators as neither variables had enough items required for parceling.

The results of the CFA, which can be found in Table 2, showed that the one-factor model, in which all constructs loaded into a single latent variable, did not fit the data well: χ^2 (170, $N = 314$) = 1247.99, p < .001; CFI = .538; TLI = .484; and RMSEA = .142 (90% CI of RMSEA = [.136, .148]. The results for the two-factor model, in which sexual harassment loaded on its own separate but correlated factor with all other constructs loading on the second factor, also provided poor model fit to the data: χ^2 (169, $N = 314$) = 1114.94, p < .001; CFI = .587; TLI = .535; and RMSEA = .134 (90% CI of RMSEA = [.128, .139]. Finally, a six-factor model, in which all latent variables of aggression were empirically distinguishable, provided an acceptable, but not outstanding, fit to the data: χ^2 (155, $N = 314$) = 295.14, p < .001; CFI = .942; TLI = .928; and RMSEA = .054 (90% CI of RMSEA = [.046, .061].

Table 2

Fit Indices for Measurement Models

Model	χ^2	Df	CFI	TLI	RMSEA	RMSEA 90% CI
One Factor Model	1247.985***	170	0.538	0.484	0.142	[0.136; 0.148]
Two Factor Model	1114.942***	169	0.587	0.535	0.134	[0.128; 0.139]
Six Factor Model	295.137***	155	0.942	0.928	0.054	[0.046; 0.061]

Note. CFI comparative fit index; TLI Tucker-Lewis index; RMSEA root-mean-square error of approximation. *** *p* .001.

As the six-factor model was the only model to provide an acceptable fit to the data, model comparisons were not needed. While the model retained did not provide excellent absolute fit to the data, such is common with confirmatory factor analysis techniques (Kelloway, 1998). As an additional exploratory analysis, a higher order six-factor model of the construct was tested such that the concept of workplace mistreatment

acted as an overarching construct made up of separate workplace aggression constructs.

Results indicated a poor fit to the data χ^2 (164, N =314) = 429.314, p < .001; CFI = .872;

TLI = .851; and RMSEA = .072 (90% CI of RMSEA = [.065, .078]. A model comparison

was conducted, showing that a six-factor model fit the data significantly better than a

higher-order factor solution $\Delta \chi^2$ (9, N = 315) = 34.238, p < .001. As such the higher-

order factor solution was abandoned.

Table 3

Test of Model Comparison for Six Factor and Higher Order Measurement Models.

	Df	AIC	BIC	χ^2	$\Delta\chi^2$	Df diff.	Pr(>Chisq)
Six Factor	155	28485	28766	488.47			
Higher Order	164	28648	28895	669.08	34.238	9	< .001

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; * p < .05.

Before examining the moderation hypotheses of violence prevention climate on

paths within the occupational stress framework of workplace aggression (hypotheses 1 &

2 of part II), the proposed structural model was first assessed. Given that the six-factor

model provided the best fit for the data, all constructs of workplace aggression were

included in the structural path model. Risk, fear of future violence, and psychological

well-being (as measured by the General Health Questionnaire) were all included into the

path model as single indicator observable variables. As specified previously, I compared

an expanded model, which is fully mediated, with both a partially mediated and a non-

mediated model. The fully mediated model included direct links from risk of workplace

violence to all workplace aggression constructs. In turn, all workplace aggression

constructs had direct links to fear of future violence, which itself had a direct link to

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404.482, p < .001; CFI = .925; TLI = .906; and RMSEA = .057 (90% CI of RMSEA =

[.050, .063]. A test of model comparison between the fully mediated and the partially

mediated models was conducted using Satorra-Bentler scaled chi-square difference test

(Satorra & Bentler, 2001). Results indicated that the partially mediated model did not

improve model fit over the fully mediated model, $\Delta \chi^2$ (5, $N = 315$) = 10.708, p > .05.

Estimations of model fit for the non-mediated model was not obtained, as the results

failed to converge. As a result, the more parsimonious fully-mediated model was retained.

The retained model with all standardized parameter estimates can be found in Figure 5.

Table 5

Model Comparison for Structural Models

Model	Df	AIC	BIC	χ^2	$\Delta\chi^2$	Df Diff.	Pr(>Chisq)
Partially Mediated Model	201	34481	34841	633.16			
Fully Mediated Model	206	34484	34826	646.13	10.708	5	0.057

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; * *p* < .05.
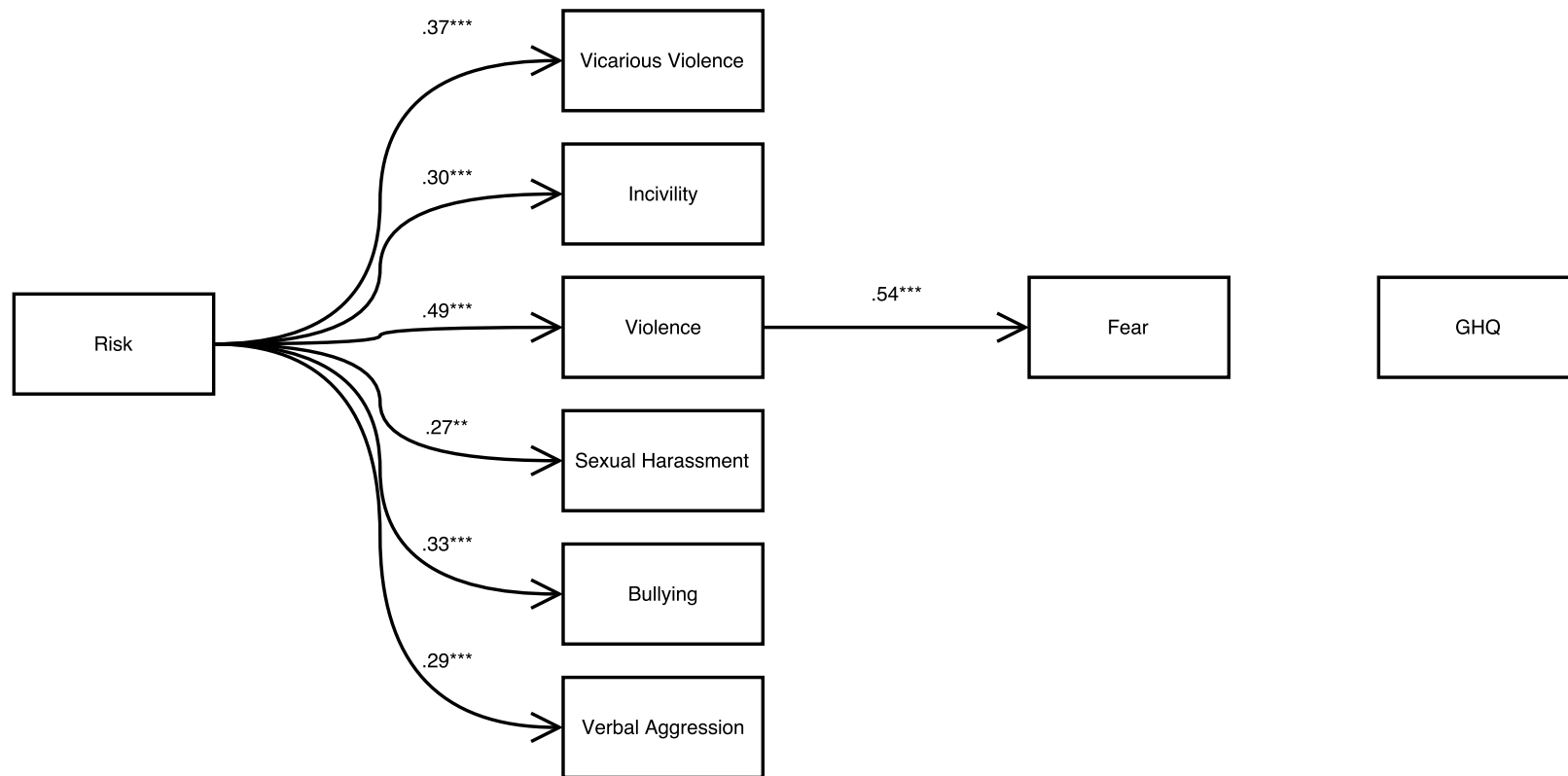
Figure 5. Retained fully mediated model with standardized parameter estimates. Non-significant links are not shown. *p < .05. **p < .01. ***p < .001

To test the hypotheses of moderation of violence prevention climate on several links within the fully-mediated model, Preacher and Hayes's (2013) PROCESS was used with bootstrap run 1000 times for each analysis. For each hypothesized moderation, the three dimensions of violence prevention climate were tested individually. All results of the moderations are reported in tables 6-18, with visual representations of significance found in figures 18-20. For sake of brevity, only ΔR^2 will be reported in text for significant interactions.

The first hypothesis theorized that violence prevention climate would moderate the link between organizational risk for violence on all aggression outcomes. Examination of the polices & procedures facet of violence prevention climate showed significant interactions with risk on physical violence ($\Delta R^2 = .03$, see Table 8), sexual harassment ($\Delta R^2 = .04$, see Table 9), verbal aggression ($\Delta R^2 = .02$, see Table 10), and vicarious aggression ($\Delta R^2 = .02$, see Table 11). Interactions between polices & procedures and risk on both bullying and incivility were non-significant. Examination of the practices & responses facet of violence prevention climate revealed significant interactions with risk on both physical violence ($\Delta R^2 = .07$, see Table 8), and sexual harassment ($\Delta R^2 = .07$, see Table 9). Interactions between practices & responses and risk on verbal aggression, incivility, bullying, and vicarious violence were all non-significant. Lastly, examining the pressure for unsafe practices facet of violence prevention climate revealed significant interactions between pressure and risk on both incivility ($\Delta R^2 = .03$, see Table 7), and verbal aggression ($\Delta R^2 = .02$, see Table 10). All other interactions between pressure for unsafe practices and risk on the remaining aggression outcomes (bullying, physical violence, vicarious aggression, and sexual harassment) were non-significant. Simple

slopes for each significant interaction were conducted and found to be in the expected

direction, such that higher perceptions of prevention climate resulted in reduced

aggression outcomes, with the exception of pressure and risk on verbal aggression (see

figure 13). These results indicated partial support for hypothesis 1.

Table 6

Moderation of Violence Prevention Climate on the Risk-Bullying Relationship.

		Bullying		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.41**	0.28**	0.21*
Violence Prevention Climate		-0.12**	-0.18**	-0.08**
	ΔR^2	0.18	0.24	0.11
Interaction		0.00	0.00	0.00
	ΔR^2	0.03	0.02	0.00

Note. * = $p < .05$, ** = $p < .00$

Table 7

Moderation of Violence Prevention Climate on the Risk-Incivility Relationship.

		Incivility		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.20**	0.15**	0.07
Violence Prevention Climate		-0.04**	-0.07**	-0.04**
	ΔR^2	0.10	0.16	0.1
Interaction		0.00	0.00	0.00*
	ΔR^2	0.01	0.01	0.03

Note. * = $p < .05$, ** = $p < .00$

Table 8

Moderation of Violence Prevention Climate on the Risk-Violence Relationship.

		Physical Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.13**	0.11**	0.09**
Violence Prevention Climate		-0.01*	-0.02**	-0.01*
	ΔR^2	0.21	0.25	0.21
Interaction		0.00**	0.00*	0.00
	ΔR^2	0.03	0.07	0.00

Note. * = p < .05, ** = p < .00

Table 9

Moderation of Violence Prevention Climate on the Risk-Sexual Harassment Relationship.

		Sexual Harassment		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.26**	0.17**	0.13*
Violence Prevention Climate		-0.07**	-0.10**	-0.04*
	ΔR^2	0.15	0.17	0.08
Interaction		0.00**	-0.01**	0.00
	ΔR^2	0.04	0.07	0.00

Note. * = p < .05, ** = p < .00

Table 10

Moderation of Violence Prevention Climate on the Risk-Verbal Aggression Relationship.

		Verbal Aggression		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.09**	0.06**	0.07**
Violence Prevention Climate		-0.02**	-0.02**	-0.01
	ΔR^2	0.10	0.09	0.07
Interaction		0.00*	0.00	0.00*
	ΔR^2	0.02	0.01	0.02

Note. * = p < .05, ** = p < .00

Table 11

Moderation of Violence Prevention Climate on the Risk-Vicarious Aggression Relationship.

		Vicarious Aggression		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Risk		0.12**	0.10**	0.10**
Violence Prevention Climate		-0.01	-0.03*	-0.01
	ΔR^2	0.13	0.14	0.11
Interaction		0.00*	0.00	0.00
	ΔR^2	0.02	0.02	0.01

Note. * = p < .05, ** = p < .00

The second hypothesis theorized that there would be a moderated mediation such that the mediation of fear of future violence on the link between workplace aggression and psychological well-being are moderated by violence prevention climate perceptions. In other words, violence prevention climate was predicted to moderate both the links between aggression outcomes to fear (hypothesis 2a) as well as that between fear to psychological well-being (hypothesis 2b).

Regarding hypothesis 2a (the moderating effect of violence prevention climate on the aggression outcomes to fear relationships), examination of both polices & procedures, as well as the practices & responses facets of violence prevention climate yielded no significant interactions with aggression measures on fear. However, examination of the pressure for unsafe practices facet showed significant interactions with bullying ($\Delta R^2 =$ .06, see Table 12), incivility ($\Delta R^2 = .17$, see Table 13), and sexual harassment ($\Delta R^2 = .05$, see Table 15), on fear of future violence. In addition, while non-significant, interactions between pressure for unsafe practices and both verbal aggression and vicarious violence on fear were trending significance ($p < .1$). There were no interactions between pressure for unsafe practices and physical violence on fear. Simple slopes for each significant interaction were conducted and found to be in the expected direction, such that lower perceptions of pressure for unsafe practices resulted in a reduction of fear when exposed to those specific aggression outcomes. These results indicated partial support for hypothesis 2a.

Table 12

Moderation of Violence Prevention Climate on the Bullying-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Bullying		0.06*	0.04*	0.03*
Violence Prevention Climate		0.01	0.00	-0.02**
	ΔR^2	0.12	0.10	0.16
Interaction		0.00	0.00	0.00*
	ΔR^2	0.00	0.01	0.06

Note. * = $p < .05$, ** = $p < .00$

Table 13

Moderation of Violence Prevention Climate on the Incivility-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Incivility		0.11*	0.11*	0.06**
Violence Prevention Climate		0.00	0.00	-0.02**
	ΔR^2	0.12	0.15	0.21
Interaction		0.00	0.00	0.00**
	ΔR^2	0.00	0.00	0.17

Note. * = $p < .05$, ** = $p < .00$

Table 14

Moderation of Violence Prevention Climate on the Violence-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Physical Violence		0.49**	0.42**	0.40*
Violence Prevention Climate		0.00	0.00	-0.01
	ΔR^2	0.45	0.41	0.64
Interaction		0.00	0.00	0.00
	ΔR^2	0.00	0.02	0.00

Note. * = p < .05, ** = p < .00

Table 15

Moderation of Violence Prevention Climate on the Sexual Harassment-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Sexual Harassment		0.10*	0.07*	0.04**
Violence Prevention Climate		0.00	-0.01	-0.02*
	ΔR^2	0.11	0.11	0.15
Interaction		0.00	0.00	0.00*
	ΔR^2	0.01	0.00	0.05

Note. * = p < .05, ** = p < .00

Table 16

Moderation of Violence Prevention Climate on the Verbal Aggression-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Verbal Aggression		0.27**	0.22**	0.21**
Violence Prevention Climate		0.00	-0.01	-0.02**
	ΔR^2	0.17	0.15	0.20
Interaction		0.00	0.00	0.00
	ΔR^2	0.00	0.01	0.03

Note. * = $p < .05$, ** = $p < .00$

Table 17

Moderation of Violence Prevention Climate on the Vicarious Violence-Fear Relationship.

		Fear of Future Violence		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Vicarious Violence		0.31**	0.25**	0.21**
Violence Prevention Climate		0.00	-0.01	-0.02*
	ΔR^2	0.29	0.23	0.29
Interaction		0.00	0.00	0.00
	ΔR^2	0.00	0.00	0.04

Note. * = $p < .05$, ** = $p < .00$

Finally, hypothesis 2b examined the moderating effects of violence prevention climate on the relationship between fear and psychological well-being. Examination of both practices & responses, as well as the pressure for unsafe practices yielded no significant interactions between those facets of violence prevention climate and fear on psychological well-being. However, examination of the policies & procedures facet showed significant interactions between fear on psychological well-being (ΔR^2 = .02, see Table 18). The simple slope for this significant interaction (see figure 17) was conducted and found to be in the expected direction, such that higher perceptions of policies & procedures reduced the negative effects of fear on psychological well-being, relative to lower perceptions. As such, hypothesis 2b was partially supported.

Table 18

Moderation of Violence Prevention Climate on the Fear-Psychological Well-Being Relationship.

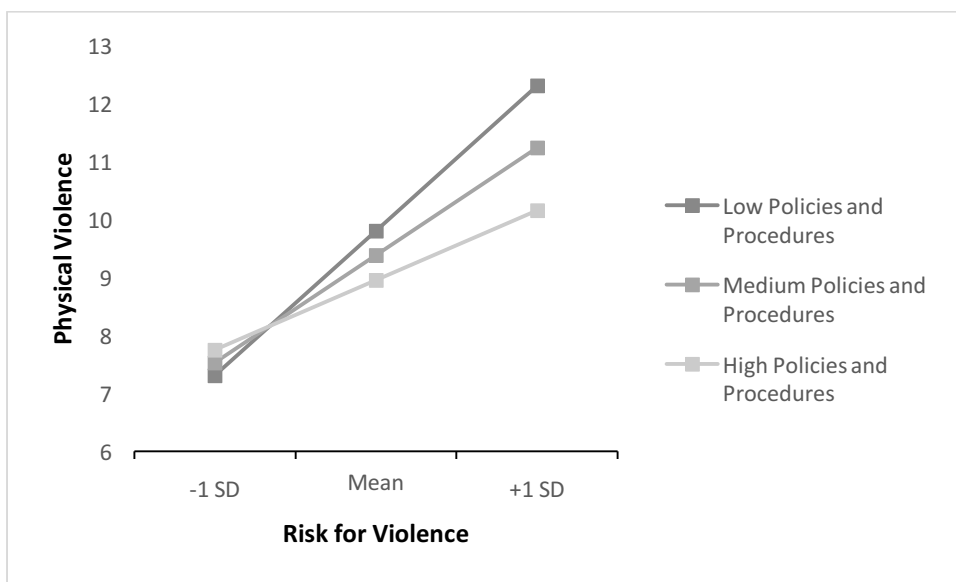|		Psychological Well-Being		
		Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Fear of Future Violence		0.00	0.19	-0.31
Violence Prevention Climate		0.02*	0.02	0.01
	ΔR^2	0.02	0.02	0.01
Interaction		0.01*	0.00	0.00
	ΔR^2	0.02	0.00	0.00

Figure 6. Simple slopes of risk of violence predicting physical violence for low, medium, and high levels of policies and procedures.

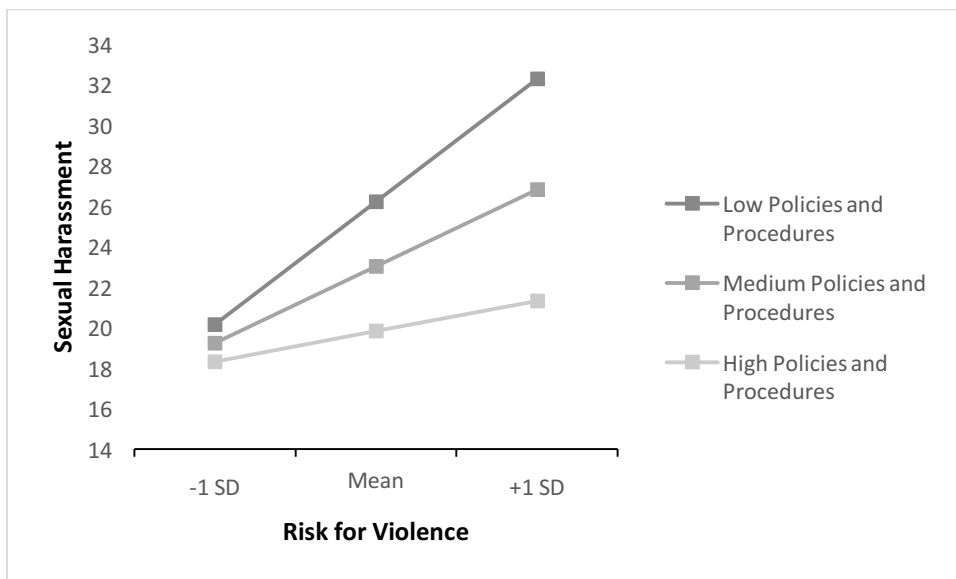*Figure 7.* Simple slopes of risk of violence predicting sexual harassment for low, medium, and high levels of policies and procedures.

Figure 8. Simple slopes of risk of violence predicting verbal aggression for low, medium, and high levels of policies and procedures.

Figure 9. Simple slopes of risk of violence predicting vicarious violence for low, medium, and high levels of policies and procedures.
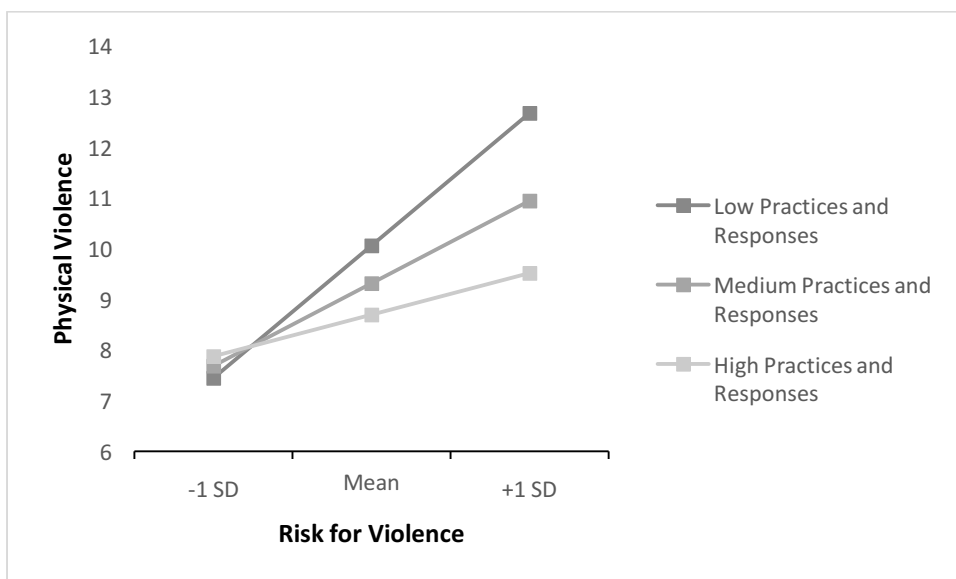
Figure 10. Simple slopes of risk of violence predicting physical violence for low, medium, and high levels of practices and responses.
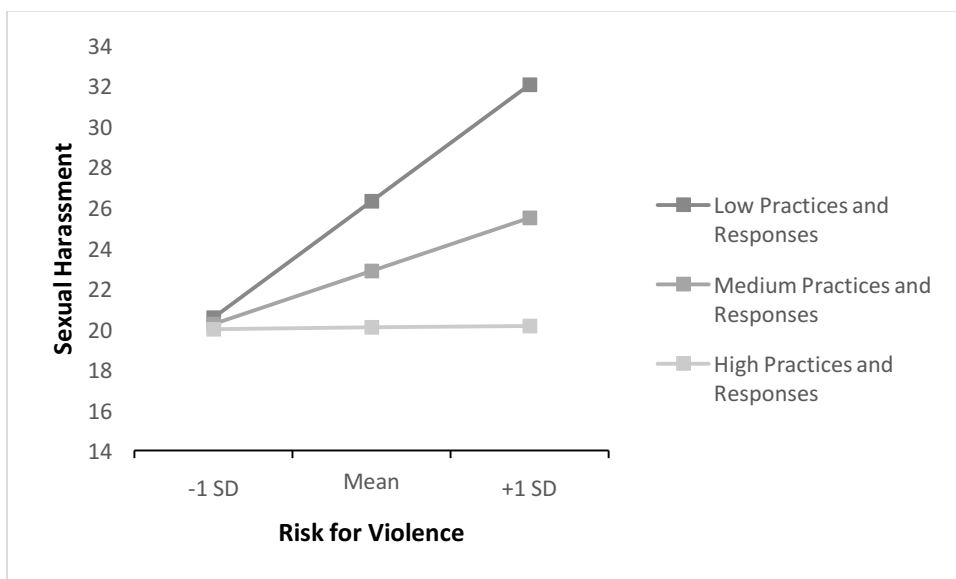
Figure 11. Simple slopes of risk of violence predicting sexual harassment for low, medium, and high levels of practices and responses.
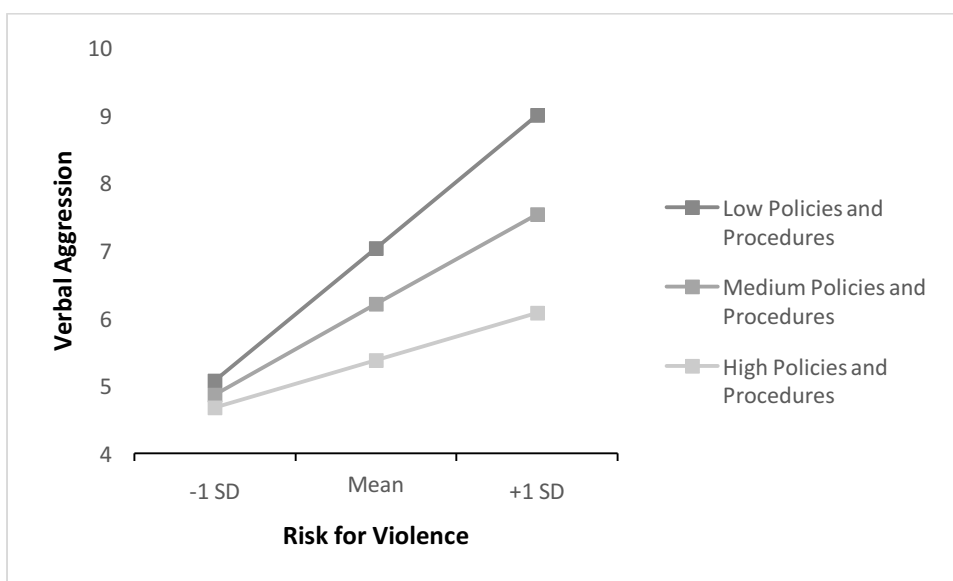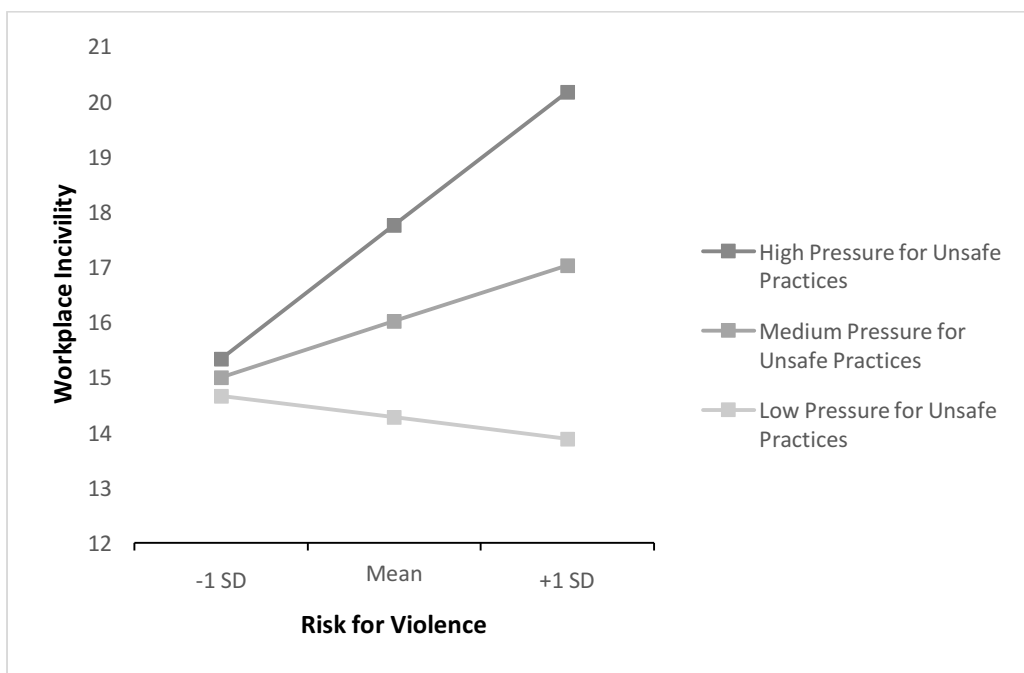
Figure 12. Simple slopes of risk of violence predicting workplace incivility for low, medium, and high levels of pressure for unsafe practices.
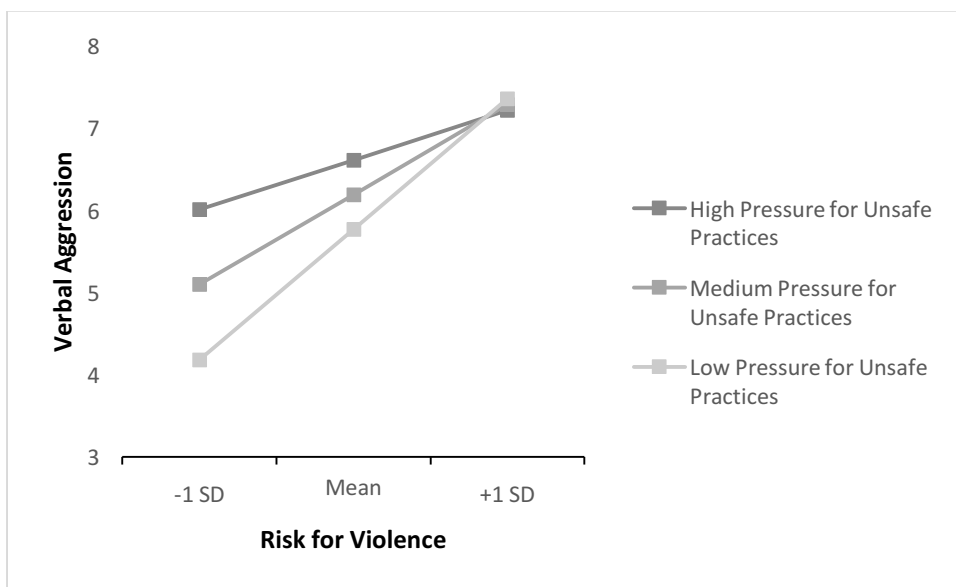
Figure 13. Simple slopes of risk of violence predicting verbal aggression for low, medium, and high levels of pressure for unsafe practices.
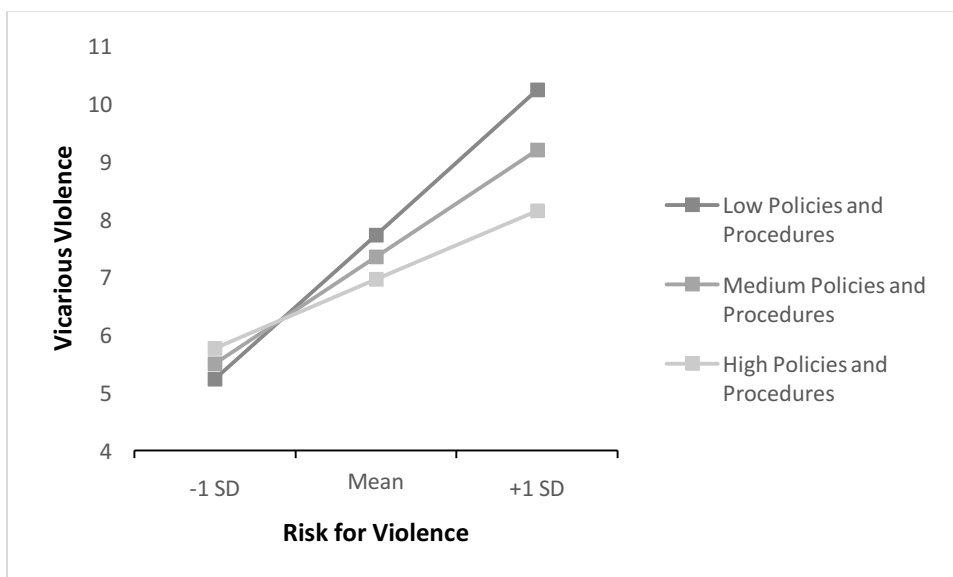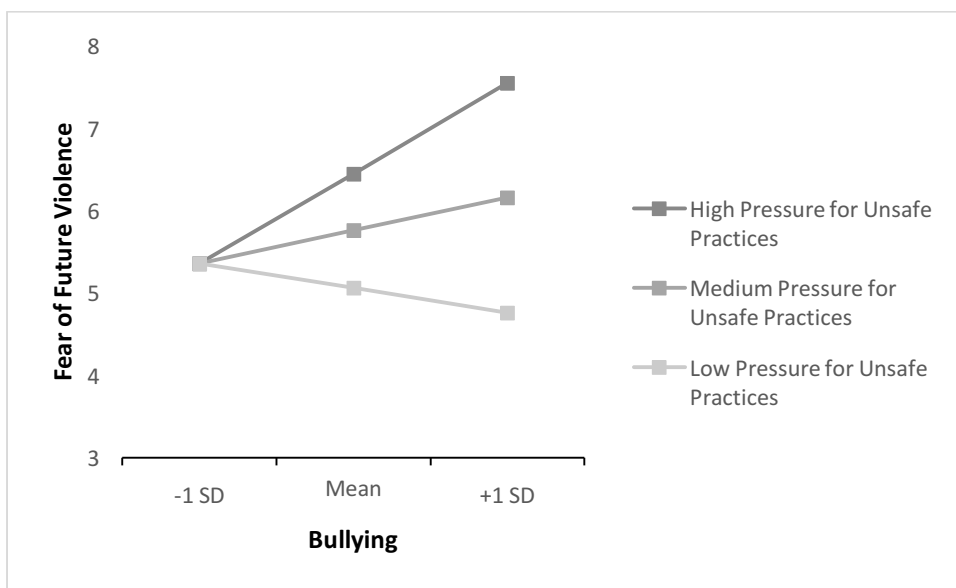
Figure 14. Simple slopes of bullying predicting fear of future violence for low, medium, and high levels of pressure for unsafe practices.

Figure 15. Simple slopes of incivility predicting fear of future violence for low, medium, and high levels of pressure for unsafe practices.
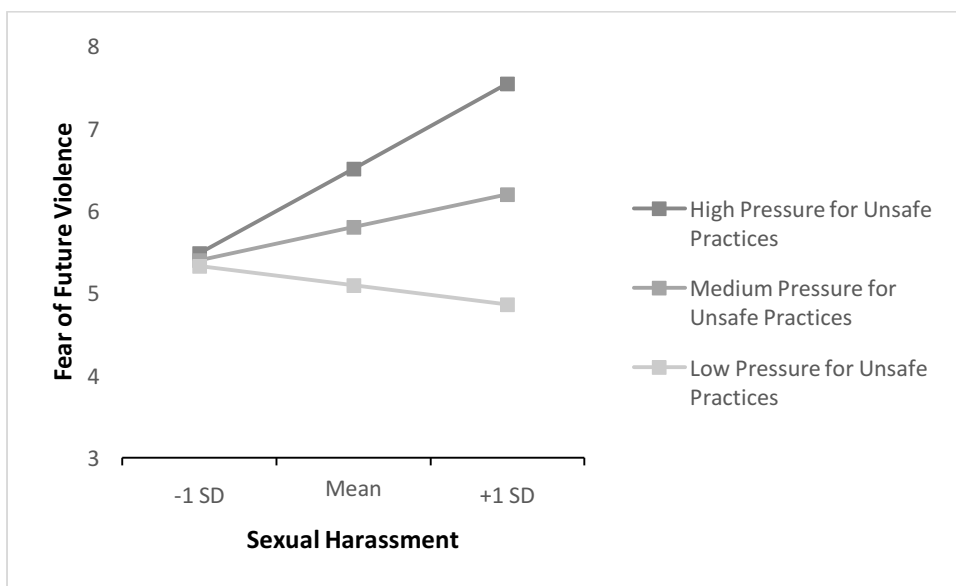
Figure 16. Simple slopes of sexual harassment predicting fear of future violence for low, medium, and high levels of pressure for unsafe practices.
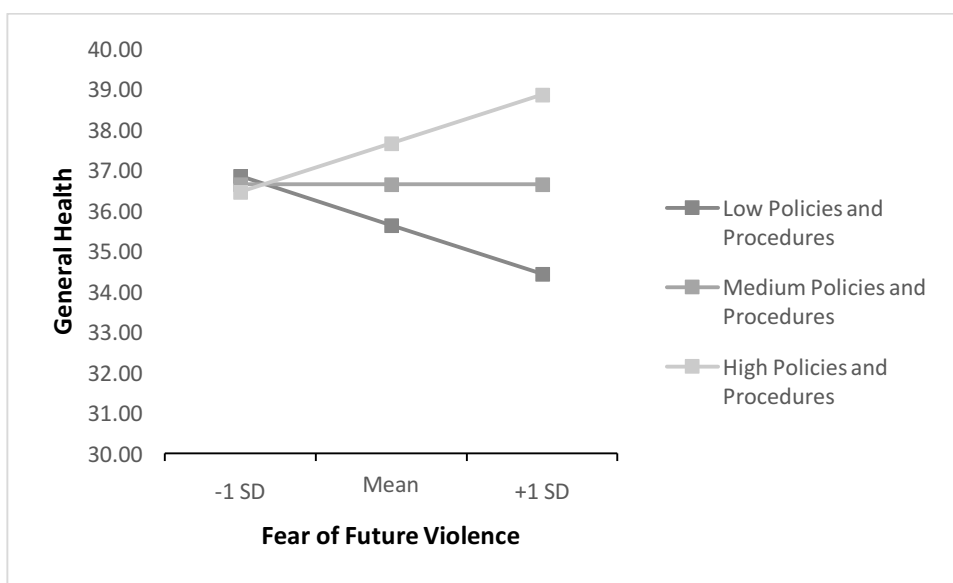
Figure 17. Simple slopes of fear of future violence predicting psychological well-being for low, medium, and high levels of policies and procedures.
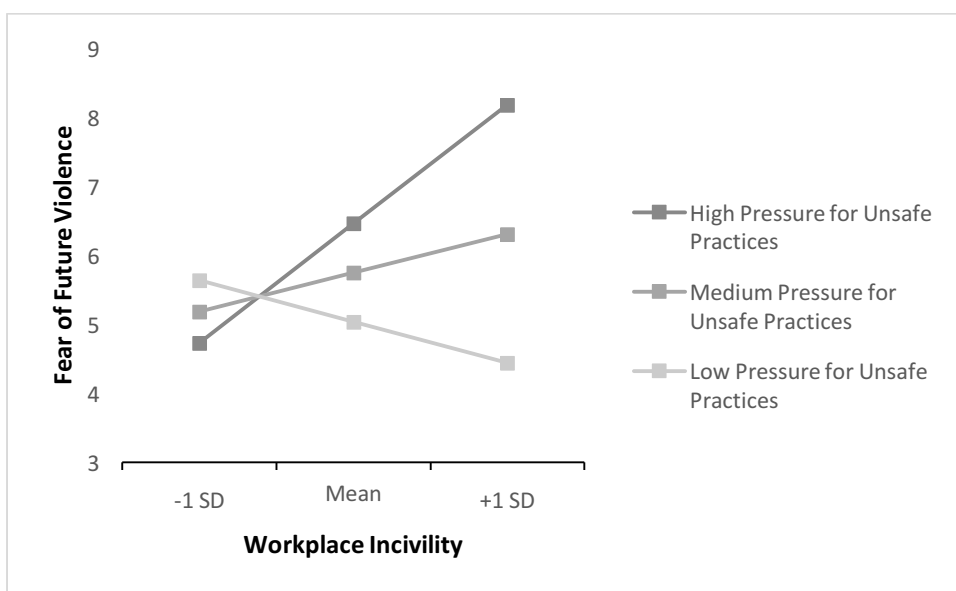
Risk-Aggression

	Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Bullying	Trending	Trending	Non-significant
Incivility	Trending	Trending	Significant
Physical	Significant	Significant	Non-significant
Sexual	Significant	Significant	Non-significant
Verbal	Significant	Trending	Significant
Vicarious	Significant	Trending	Trending

Legend
Significant	
Trending (>= 1% var)	
Non-significant	

Figure 18. Visual representation of moderation results for the moderation of VPC on the Risk-Aggression relationship.

	Aggression-Fear		
	Policies & Procedures	Practices & Responses	Pressure for Unsafe Practices
Bullying	Non-significant	Trending	Significant
Incivility	Non-significant	Non-significant	Significant
Physical	Non-significant	Non-significant	Non-significant
Sexual	Non-significant	Non-significant	Significant
Verbal	Non-significant	Trending	Trending
Vicarious	Non-significant	Non-significant	Trending

Legend
Significant	
Trending (>= 1% var)	
Non-significant	

Figure 19. Visual representation of moderation results for the moderation of VPC on the Aggression-Fear relationship.

	Fear-Well-Being		
	Policies & Procedures	**Practices & Responses**	**Pressure for Unsafe Practices**
GHQ	▨▨▨		

Legend

▨▨▨	Significant
▦▦▦	Trending (>= 1% var)
	Non-significant

Figure 20. Visual representation of moderation results for the moderation of VPC on the Fear-Well-Being relationship.

Discussion

The first part of my thesis was aimed at providing empirical evidence for the one-factor model of workplace aggression, further supporting repeated claims for construct synthesis within the workplace aggression literature (see Aquino, 2009; Hershcovis, 2011). Using the constructs of physical violence, vicarious violence, verbal aggression, bullying, incivility, and sexual harassment, a confirmatory factor analysis was conducted to determine the best fitting model. A one-factor model was hypothesized such that all constructs included were sufficiently related to each other to warrant their inclusion in a singular global construct of workplace aggression. This model was tested against two alternative models: the two-factor model, which was identical to the one-factor model with the exception that sexual harassment loaded onto its own factor, and the six-factor model which posited that all constructs were empirically distinguishable from each other. Results indicated that neither the one-factor, nor the two-factor model of workplace aggression provided good fit to the data. On the other hand, the six-factor model of workplace aggression provided good fit, suggesting that all constructs included are empirically distinguishable from each other.

Given these findings, it is worth re-examining the rationale behind the many calls for construct synthesis and integration. The sudden increase in interest for workplace aggression research in the 1990's resulted in an explosion of constructs which have often been studied independently of each other by specific researchers. The resulting literature quickly found itself comprised of a multitude of similar, yet conceptually different constructs. While the profusion of interest in workplace aggression was well-received, many researchers actively voiced their concern about the fragmentation of the field citing

concerns of measurement and dimensional overlap between varying constructs (Aquino, 2009; Hershcovis, 2011; Neuman & Baron, 2005). Calls for the integration of these constructs were based on the notion that the failure to do so would impede the advancement of important theoretical and practical developments (Aquino, 2009; Neuman & Baron, 2005). This is perhaps best illustrated by Geen (1991) one of the first pioneers behind the examination of workplace aggression. Geen argued that while it is understandable that various forms of workplace aggression merit their own precision and clarity of definition, as distinct from other constructs, restricting the study of workplace aggression to this level of specificity would obscure the possibility that these constructs possess some similarities. As Baron & Neuman (2005) state, while we know that each of these distinct aggression outcomes have negative implications, this conclusion overlooks the notion that all such constructs may have commonalities. In order to truly comprehend what is happening, it is these commonalities that must be studied (Baron & Neuman, 2005).

This argument is further advanced by Hershcovis, who argued that the supposed differences between constructs vary based on conceptions of (1) Intensity, (2) frequency, (3) perpetrator power/position, (4) outcomes to be affected, and (5) intent, all of which were assumed within the definition of the constructs themselves, but never measured directly. In addition, Hershcovis claims that the measurement and dimensional overlap between constructs fail to effectively differentiate themselves. In other words, the constructs in the domain of workplace aggression fail to vary based on the conceptualizations within their definition (i.e., intensity, frequency, etc.) Using this, Hershcovis proposed a new model of workplace aggression by which the common

elements of aggression are the starting point within the current accepted model of occupation aggression, with varying conceptualizations of the distinct constructs serving as moderators.

Viewed in this light, my results bear significant contradictions to Hershcovis' claim of construct similarity, without refuting the author's underlying suggestion of examining the variation of these construct's conceptions. The six-factor model of workplace aggression supported in this thesis provides empirical evidence for the unique distinction between constructs analyzed. While these results do not reject the idea for the need to measure the influencing effects of the assumed conceptual distinctions within constructs, they do argue for their preexistence. In other words, whereas Hershcovis (2011) stated that the differentiation between constructs were merely assumptions of their various definitions, current empirical evidence has shown that these differentiations are indeed tangible. The real question remains: how, given that such differentiating characteristics were never measured? As a result, it would be worth examining the precise way in which these constructs differ to better determine how such variations adversely influence outcomes. Although this suggestion provides an important future direction which does not directly reject Hershcovis' underlying desire, prudence is warranted when attempting to do so. While it is likely that the distinction between constructs are the result of variations of common elements (e.g., intensity), they may also distinguish themselves in ways that are not yet comparable. For example, implicit in the original construct synthesis proposed by Hershcovis is the notion that each construct observed would vary based on a continuum of the aforementioned conceptualizations. In other words, physical violence is just a more intense form of verbal aggression. There is good reason to believe

that this may not be true. For example, a light intentional shove may be perceived as unacceptable, in comparison to consistent exposure to workplace bullying which may be viewed as simply "part of the job". While the latter would be construed as higher in severity, the former may lead to stronger negative implications, including organizational turnover. This potential eschewal of variations within a continuum of differentiating characteristics may render the direct comparisons of constructs difficult, if not impossible, providing more evidence for the necessity of analyzing specific constructs, and their influences, separately.

To summarize, my hypothesized one-factor model of workplace aggression was not supported while a six-factor solution provided the best fit, indicating the empirical distinction between each construct. While may be the case, the objective behind the desire to synthesize workplace aggression constructs, which is to say the prevention of impediment of theoretical and practical advances within the field, was not refuted but refined. The evidence put forth in this thesis suggesting the empirical differentiation of several workplace aggression constructs suggests that the differentiation has not necessarily impeded the development of the field. By analyzing what makes these constructs unique, we may perhaps get a better understanding at how they influence specific outcomes, within the contextualization of individual and organizational differences. That said, this does not imply that we should reject attempts to disregard the common elements of behind workplace aggression. Previous examination of commonalities have allowed researchers to establish working models of workplace aggression. While this has provided significant strides in understanding some of the mechanisms and outcomes of overall aggression, it is important to not neglect how the

distinguishing features of unique constructs of aggression vary in influence within these models. Whether unique or common factors are analyzed would thus depend on the goals of the research. As Baron & Neuman (2005) illustrate, studying a global conceptualization of workplace aggression is akin to examining a student's GPA. While it may provide useful information about an individual, it fails to conclude anything about performance in specific domains. While studying global workplace aggression is important in its own right, doing so will inevitably result in an important loss of information regarding the specificity by which the distinct constructs operate and influence outcomes.

Structural Model Tests & Moderation of Violence Prevention Climate

The next part of my thesis was aimed at confirming a widely accepted and often used structural model of workplace aggression consequences, based within the occupational stress framework. Given that the six-factor measurement model of workplace aggression constructs in the first part of my study provided the best fit to the data, all constructs were thus independently used within the structural model. My hypothesized fully mediated model of workplace aggression consequences was compared to both a partially mediated and non-mediated model. While both the partially mediated and fully mediated models provided acceptable fit to the data, there were no significant differences in model fit between the two. As such, the fully mediated model was kept, given that it provided a more parsimonious explanation. Examination of the significant standardized parameter estimate showed significant relationships between risk for violence and all aggression constructs, as was consistent with predictions (see Figure 5).

However, only physical violence directly predicted fear of future violence, while the latter did not predict psychological well-being as was expected.

While these observations seem perplexing, there are important justifications to bear in mind. To begin, the lack of minimally adequate fit of the structural model to the data can be explained by the limitations imposed by the measurement model such that the fit of the structural model can never provide a better fit to the data than that of the measurement model (Kelloway, 2015). Regarding the unexpected lack of significant standardized parameter estimates, it is important to note that the cross-sectional data resulted from the assessment of a host of different organizations with varying degree of violence prevention climate perceptions. As such, the structural model did not account for potential influence of variations in violence prevention climate perceptions within the overall model.

Examination of the moderating effects of violence prevention climate within the structural model provided a seemingly disarray of results, with various elements of prevention climate moderating unique relationships within the structural model. However, while initial observations of violence prevention climate appear to show no discernable pattern, a closer examination provides some interesting insight. In order to best comprehend the functional mechanisms theorized by the assessment of the results, it is necessary to briefly review the findings. To begin, my first hypothesis was violence prevention climate perceptions would moderate the link between organizational risk for violence and subsequent exposure. Observation of the results showed that policies & practices moderated the relationship on risk to all workplace constructs but incivility and bullying, although bullying was trending significance. Practices & responses moderated

the relationship between risk and both physical violence and sexual harassment, with pressure for unsafe practices moderating the relationship between risk and both incivility and verbal aggression. Regarding the first part of my second hypothesis (hypothesis 2a), only pressure for unsafe practices moderated the relationship between aggression constructs and fear of future violence, moderating bullying, incivility, and sexual harassment. While it did not significantly moderate verbal and vicarious aggression, the moderation both constructs were trending significance. Physical violence was not moderated in any way. Finally, for my last hypothesis (hypothesis 2b), only policies & procedures moderated the relationship between fear of future violence and psychological well-being.

Violence prevention climate is a multidimensional assessment of how individuals perceive that the policies, practices and procedures of the organization work to control and eliminate workplace violence and aggression (Chang et al., 2012; Kessler et al, 2008). The policies & procedures dimension refers to formal organizational rules and regulation regarding the prevention of violence and aggression through the proper channels. The practices & responses dimension is the extent to which management adheres to and responds to the policies regarding exposure to violence and aggression. Finally, the pressure for unsafe practices of violence prevention climate consist of perceived pressure to ignore formal organizational policies and subsequently conform to group norms. While both polices & procedures as well as practices & responses refer to more structured and formal dimensions of violence prevention climate, pressure for unsafe practices are based more on informal organizational norms (Chang et al., 2012). In regards to workplace violence and aggression, while all constructs analyzed in this thesis

can be perpetrated by both organizational outsiders and insiders, acts of violence and sexual harassment are more often perpetrated by outsiders rather than insiders, the latter favoring more discreet and less intense forms of aggression such as verbal aggression or incivility (Baron & Neuman, 1996; LeBlanc & Kelloway, 2002).

While organization policies do an effective job of moderating the relationship between risk and most forms of workplace violence & aggression, they do not have the intended effect on more subtle forms of mistreatment, such as bullying and incivility. On the other hand, pressure for unsafe practices effectively moderates the exposure to both incivility and verbal aggression. Finally, management adherence to organizational policies and response to workplace violence and aggression seems to mainly target more serious forms of aggression, moderating both physical violence and sexual harassment. Although not measured, it is possible that the pattern of results can be explained by source, rather than type of aggression per se. In other words, it is possible that organization policies and procedures are most effective against exposure to workplace violence and aggression from organizational outsiders. One could imagine for example, that publically visible zero-tolerance policies of violence and aggression, among other formal policies, signal to such potential perpetrators that the organization will not tolerate any form of mistreatment. This deterrent may be further reinforced by actual instances of managerial intervention to previous acts of violence and aggression, further bolstering their reputation as an organization which cracks down on mistreatment. On the other hand, pressure for unsafe practices may be more effective at regulating organizational insider mistreatment. Working in environments which are at high risk for violence and aggression is inherently stressful. The influence of stress in turn acts as an antecedent of

workplace harassment (Bowling, 2006). Indeed, not only do the experience of stressors

result in negative emotions and behavioral responses that potentially cause perpetrators to

lash out at colleagues as a result of diminished self-regulation, but these same negative

emotions further encourage victimization (Bowling, 2006). Subsequent victimization in

turn results in a vicious cycle of retaliatory behaviors towards the aggressor, as evidenced

by the strong relationship between being a victim and a perpetrator (r = .52; (Aquino and

Lamertz, 2004; Glomb & Liao, 2003). While formal organizational policies may elicit

organizationally-tolerated behaviors, they are essentially ineffective if informal normative

pressure exist to disregard them. Given this, whereas formal policies of violence

prevention may act as a deterrent to organizational outsiders, they act as nothing but a

guise to employees within the organization. This normative pressure would thus allow

mistreatment between co-workers to proceed, unchecked. Given the aforementioned

preference for more passive and subtle forms of aggressive behavior (Baron & Neuman,

1996; LeBlanc & Kelloway, 2002) between organizational insiders, this would potentially

explain the moderation of pressure for unsafe practices on incivility and verbal

aggression. It is worth noting that the moderation of pressure for unsafe practices on risk

for violence predicting verbal aggression was significant, but not in the expected

direction. Although not measured, it is possible that high risk for violence jobs involving

unpleasant interpersonal characteristics, such as the denial of service to organizational

outsides (LeBlanc & Kelloway, 2002), are met with less intense forms of verbal

aggression from those outsiders, potentially confounding the expected results. This would

help to explain the apparent expected group differences in exposure to verbal aggression

in low risk jobs, and lack of group differences in exposure to verbal aggression in high risk jobs.

These previous notions can also serve to explain the resulting moderation effects in the relationship between exposure to workplace aggression and fear of future violence (hypothesis 2a). For example, only pressure for unsafe practices moderated the effects of nearly every form of workplace aggression to subsequent fear of future violence. In a similar vein, while organizational policies on workplace violence and aggression may deter aggressive behaviors, it may do little to mitigate the stress and fear of future violence if employees are aware of organizations' lack of actual adherence to formal policies. While formal policies may do a good job of acting as an initial deterrent from public initiated violence and aggression, it may do little to stifle employees' fear of future violence once they have been exposed to mistreatment, regardless of the source, as a result of their knowledge pertaining to normative behavior and pressure to ignore formal policies when they do occur. It is important to note that although pressure for unsafe practices did not moderate the relationship between both verbal aggression and vicarious violence on fear of future violence, both were trending significance and accounted for more than 3% of the variance. According to Aiken and West (1991), any interaction is important if it accounts for more than 1% of the variance, even if it is not statistically significant. In regards to the lack of any sort of violence prevention climate moderation between physical violence and fear of future violence, it is possible that perceptions of workplace violence are seen as severe enough to traumatize victims, regardless of formal or informal policies and norms. In addition, acts of violence are often perpetrated in

majority by criminals who exhibit no regard for organizational policies, something which may be well known to employees (Kelloway et al., 2013).

Finally, only policies and procedures moderated the relationship between fear of future violence and psychological well-being (examination of hypothesis 2b). Given the significant implications of psychological well-being on physical, behavioral, and organizational outcomes, this is arguably the most important relationship within the model. Interestingly enough, while many studies have examined and observed links from fear of future violence to individual and organizational outcomes (Rogers & Kelloway, 1997; Schat & Kelloway, 2000), at least one study has not (LeBlanc & Kelloway, 2002). This discord can be best explained by examining the samples within each article. Both my thesis and LeBlanc & Kelloway's (2002) paper examined the effects of workplace violence within a variety of different organizations. On the contrary, models put forth by Rogers & Kelloway (1997) as well as Schat & Kelloway (2000), both of who observed a mediating effect of fear of future violence on the relationship between workplace violence & aggression and individual & organizational outcomes, only examined single organizations. By doing so both essentially controlled for perceptions of violence prevention climate, something which was not done in LeBlanc & Kelloway's (2002) study, potentially explaining the discrepancy in research findings. The stressor-stress-strain process of workplace aggression exposure stipulates that the strain (fear of future violence) caused by the stress of exposure to workplace violence & aggression causes an emotional toll which negatively predicts psychological well-being, and in turn, both somatic and organizational consequences (Schat & Kelloway, 2005). However, my research findings suggest that formal organization policies & procedures can mitigate the

consequences of fear of future violence on psychological well-being. There are several reasons why this may be the case. To begin, one of the main benefits of organizational policies & procedures of workplace violence and aggression may pertain to the formal training received by the organization in dealing with subsequent exposure. Related to this is the notion that formal policies may reduce the ambiguity for employees concerning appropriate behaviors and responses (Chang et al., 2012). Both of these concepts serve to increase employee perceptions of control which has been previously shown to directly enhance emotional well-being (Schat & Kelloway, 2000). In fact, this notion is the main reason why many researchers have already made arguments to the benefits of providing employee training in responding to workplace violence & aggression as an organizational intervention aimed at reducing the negative consequences of exposure (see Schat & Kelloway, 2006; Kelloway et al., 2013). As such, this finding further underlines the importance of organizational policies & procedures which provide employees with the knowledge to personally and appropriately react to instances of exposure to workplace violence & aggression, thus reducing potential strain outcomes.

Implications, Limitations, and Concluding Thoughts

The results of this thesis have provided significant implications for future research and practice. By empirically examining various constructs of workplace violence and aggression I have provided evidence for the necessity of keeping their analysis, and consequences, separate from each other. Rather than attempting to merge various constructs of workplace aggression together, researchers should aim to first examine and validate existing theories regarding the common and distinct features between them (see Kent, Troth, and Jordan, 2014), before then determining how such shared and unique

elements influence potential outcomes. Regardless of whether or not researchers choose to proceed in this direction, the empirical evidence suggests that the perceptions, and thus potential consequences, of various types of workplace aggression constructs are distinct from one another. This evidence provides additional support to a previous doctoral thesis which also examined and uncovered empirical distinction between other forms of aggression constructs pervasively found within the literature (Steinert, 2015). As such, while fears of impediment of theoretical development in the literature may seem well founded, recent research suggests that they are not. That said, attempts to empirically assess distinguishing and common elements would provide great strides in evaluating the very elements responsible for specific outcomes, allowing us to better comprehend the functional mechanisms behind acts of workplace aggression.

The literature on workplace violence and aggression has resulted in large complex models of antecedents, moderators, mediators and consequences, fitting to the complex nature of organizational mistreatment (see Bowling & Beehr, 2006; Snyder, Chen, Grubb, Roberts, Sauter, & Swanson, 2005). While much work remains in assessing and validating the numerous components within these models, my research has provided interesting insight into how climate perceptions influence both exposure and consequences of workplace aggression. With the significant and numerous consequences related to exposure of workplace mistreatment as well as the mandatory legislature requiring organizations to address and limit such, it is more important than ever to provide working solutions for the mitigation of violence and prevention. While future research is definitely warranted, the results provided within this thesis provide preliminary evidence for the positive effects of violence prevention climate. This provides

organizations with potential solutions for how they may begin to appease exposure and

enhance individual well-being all while reducing subsequent organizational costs

associated with the former's ramifications.

Despite these interesting and promising results, there are several limitations

which warrant attention. First, the study was cross-sectional in nature. Given that data

from all variables were collected at the same time, causality of events cannot be

determined. While my model provided an acceptable fit to the data, it is more than

possible that other models would provide a good fit to the data. As LeBlanc and Kelloway

(2002) state, a model stipulating that exposure to workplace aggression renders them

more sensitive to risk factors may also be acceptable. As such, longitudinal data is the

only acceptable method for attempting to establish causality of events. However, despite

these limitations, the manner in which this cross-sectional data was collected provides

some significant advantages which may be difficult if not impossible to implement in

longitudinal forms of research. The Qualitrics panel employed allowed the collection of

data from numerous different and diverse organizations, allowing me to generalize across

organizations. In addition, this form of data collecting ensured that participants' responses

remained anonymous, limiting response distortion. This has particular advantages when

considering that perceptions of a research topic as threatening may have cause significant

reductions in response accuracy (Lee, 1993). In other words, entering an organization and

obtaining data from employees for which their manager has given consent may cause

participants to fear the anonymity of their data, resulting in biased responses. A potential

solution addressing the limitation of causality while retaining the benefits of sample

diversity in a cost-effective way may be through the use of ecological momentary

assessment methods (Schwartz & Stone, 1998). The ever-increasing development of new technology now provides researchers with the opportunity to allow repeated sampling of short electronic questionnaires sent to participant's smart phone. Momentary assessment of risk factors and climate perceptions combined with longitudinal appraisals of exposure and subsequent well-being may provide valuable insight into the dynamic influences of these factors.

A second limitation concerns the lack of evaluation of various sources of organizational aggression. While the theories regarding the potential explanation of the moderating effects of dimensions of violence prevention climate were based on source, this was not directly assessed. It would be of great interest for future research to further assess the effects of prevention climate on the various forms of workplace aggression constructs by perpetrator in order to determine whether this produces differential outcomes. Discerning disparate effects of a prevention climate based on this variable would not only allow us to better understand the functional mechanism behind violence prevention climate perceptions, but further provide organizations with the knowledge required to best tailor and reinforce elements of prevention climate perception to more effectively address their existing issues.

A final limitation concerns the number of statistical tests conducted in the second study. With three dimensions of violence prevention climate, and six constructs of workplace aggression, there were a total of 39 moderations tested for all three hypotheses. Given a p-value set at the .05 level, the number of potential type I errors would equal two. While this is important to bear in mind, the aim of that study was not to examine the specific relationships of each and every dimension of prevention climate with each and

every construct of aggression, but rather to observe the overall pattern of results. While the results of two statistical tests may be spurious, the overall pattern of observations, and subsequent conclusions, remain clear and theoretically defensible.

In conclusion, there is still much work to be done on workplace aggression. While the nascent literature has already provided researchers with a tremendous wealth of information, the complexities and subtleties within the field provide a variety of options for future research. While it is not difficult to find extant questions that remain unanswered, the difficulty lies in knowing which to prioritize in order to ensure that the field continues to move in the right direction. In this regard, my study had two main objectives: empirically examine the merit behind a crucial proposition in a manner that would be conducive to the provision of appropriate guidance regarding the way in which researchers should proceed within the field, as well as assessing the effects of organizational culture as a potential solution for mitigating both the exposure to and resulting consequences of workplace aggression. It is my hope that researchers will continue to examine and refine the findings observed within this thesis in hopes of significantly advancing our knowledge of the domain, allowing for subsequent theoretical developments to guide the establishment of effective safeguards which protect individuals' health and safety.

References

Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.

Andersson, L. M., & Pearson, C. M. (1999). Tit for Tat? The Spiraling Effect of Incivility in the Workplace. *Academy of Management Review*, *24*(3), 452–471. https://doi.org/10.5465/AMR.1999.2202131

Aquino, K., & Lamertz, K. (2004). A Relational Model of Workplace Victimization: Social Roles and Patterns of Victimization in Dyadic Relationships. *Journal of Applied Psychology*, *89*(6), 1023–1034. https://doi.org/10.1037/0021-9010.89.6.1023

Aquino, K., & Thau, S. (2009). Workplace victimization: Aggression from the target's perspective. *Annual Review of Psychology*, *60*, 717–741.

Barling, J. (1996). The prediction, experience, and consequences of workplace violence. *Violence on the Job: Identifying Risks and Developing Solutions*, *2949*. Retrieved from http://web.business.queensu.ca/faculty/jbarling/Chapters/The%20Prediction,%20Experience%20and%20Consequences%20of%20Workplace%20Violence.pdf

Barling, J., Dupré, K. E., & Kelloway, E. K. (2009). Predicting Workplace Aggression and Violence. *Annual Review of Psychology*, *60*(1), 671–692. https://doi.org/10.1146/annurev.psych.60.110707.163629

Barling, J., Rogers, A. G., & Kelloway, E. K. (2001). Behind closed doors: In-home workers' experience of sexual harassment and workplace violence. *Journal of*

Occupational Health Psychology, *6*(3), 255–269. https://doi.org/10.1037//1076-8998.6.3.255

Baron, R. A., & Neuman, J. H. (1996). Workplace violence and workplace aggression: Evidence on their relative frequency and potential causes. *Aggressive Behavior*, *22*(3), 161–173.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. Psychological Bulletin, 88, 588-606.

Bies, R. J., & Tripp, T. M. (2005). The Study of Revenge in the Workplace: Conceptual, Ideological, and Empirical Issues. Retrieved from http://psycnet.apa.org/books/10893/003

Bjorkqvist, K., Osterman, K., & Hielt-Bdck, M. (1994). Aggression among university employees. *Aggressive Behavior*, *20*(3), 173–184.

Borman, W. C. (2004). The concept of organizational citizenship. *Current Directions in Psychological Science*, *13*(6), 238–241.

Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: a theoretical model and meta-analysis. *Journal of Applied Psychology*, *91*(5), 998.

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, *81*(4), 358.

Buss, A. H. (1961). The psychology of aggression. Retrieved from http://psycnet.apa.org/psycinfo/2006-09474-000

Chang, C.-H., Eatough, E. M., Spector, P. E., & Kessler, S. R. (2012). Violence-

    prevention climate, exposure to violence and aggression, and prevention behavior:

    A mediation model. *Journal of Organizational Behavior*, *33*(5), 657–677.

    https://doi.org/10.1002/job.776

Chang, C.-H., Rosen, C. C., & Levy, P. E. (2009). The relationship between perceptions

    of organizational politics and employee attitudes, strain, and behavior: A meta-

    analytic examination. *Academy of Management Journal*, *52*(4), 779–801.

Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress: A review*

    and critique of theory, research, and applications. Sage. Retrieved from

    https://books.google.ca/books?hl=en&lr=&id=tfNrB7ppW94C&oi=fnd&pg=PR9

    &dq=Cooper,+C.+L.,+Dewe,+P.,+%26+O%E2%80%99Driscoll,+M.+P.+(2001).

    +Organizational+stress:+A+review+and+critique+of+theory,+research,+and+appl

    ications&ots=gR3w4_U_3V&sig=95dmlvb8b4ns3CWeC6_9KAB1ZwU

Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the

    workplace: incidence and impact. *Journal of Occupational Health Psychology*,

    6(1), 64.

Denison, D. R. (1996). What is the difference between organizational culture and

    organizational climate? A native's point of view on a decade of paradigm wars.

    Academy of management review, *21*(3), 619-654.

Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining in the workplace.

    Academy of Management Journal, 45, 331–351.

Einarsen, S. ale, & Skogstad, A. (1996). Bullying at work: Epidemiological findings in

public and private organizations. *European Journal of Work and Organizational

Psychology*, *5*(2), 185–201.

Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and

harassment at work: Validity, factor structure and psychometric properties of the

Negative Acts Questionnaire-Revised. *Work & Stress*, *23*(1), 24-44.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational

support and employee diligence, commitment, and innovation. *Journal of Applied

Psychology*, *75*(1), 51.

Fitzgerald, L. F. (1990). Sexual harassment: The definition and measurement of a

construct. *Ivory Power: Sexual Harassment on Campus*, *21*(22), 24–30.

Fitzgerald, L. F., Gelfand, M. J., & Drasgow, F. (1995). Measuring Sexual Harassment:

Theoretical and Psychometric Advances. *Basic and Applied Social Psychology*,

17(4), 425–445. https://doi.org/10.1207/s15324834basp1704_2

Fitzgerald, L. F., Shullman, S. L., Bailey, N., Richards, M., Swecker, J., Gold, Y., …

Weitzman, L. (1988). The incidence and dimensions of sexual harassment in

academia and the workplace. *Journal of Vocational Behavior*, *32*(2), 152–175.

Fitzgerald, L. F., Swan, S., & Magley, V. J. (1997). But was it really sexual harassment?:

Legal, behavioral, and psychological definitions of the workplace victimization of

women. Retrieved from http://psycnet.apa.org/psycinfo/1996-98843-001

Geen, R. G. (1991). *Human aggression.* Pacific Grove, CA: Brooks/Cole,

Glomb, T. M., & Liao, H. (2003). Interpersonal aggression in work groups: Social

influence, reciprocal, and individual effects. *Academy of Management Journal,*

46, 486–496.

Hall, J. K., & Spector, P. E. (1991). Relationships of work stress measures for employees with the same job. *Work & Stress*, *5*(1), 29–35.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Hemingway, M. A., & Smith, C. S. (1999). Organizational climate and occupational stressors as predictors of withdrawal behaviours and injuries in nurses. *Journal of Occupational and Organizational Psychology*, *72*(3), 285–299.

Hershcovis, M. S. (2011). "Incivility, social undermining, bullying…oh my!": A call to reconcile constructs within workplace aggression research. *Journal of Organizational Behavior*, *32*(3), 499–519. https://doi.org/10.1002/job.689

Hershcovis, M. S., & Barling, J. (2010). Comparing victim attributions and outcomes for workplace aggression and sexual harassment. *Journal of Applied Psychology*, *95*(5), 874–888. https://doi.org/10.1037/a0020070

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Huang, Y.-H., Ho, M., Smith, G. S., & Chen, P. Y. (2006). Safety climate and self-reported injury: Assessing the mediating role of employee safety control. *Accident Analysis & Prevention*, *38*(3), 425–433.

Ilies, R., Hauserman, N., Schwochau, S., & Stibal, J. (2003). Reported incidence rates of

    work-related sexual harassment in the United States: using meta-analysis to

    explain reported rate disparities. *Personnel Psychology*, *56*(3), 607–631.

James, L. R., & Jones, A. P. (1974). Organizational climate: A review of theory and

    research. *Psychological bulletin*, *81*(12), 1096.

Jenkins, L. (1996). *Violence in the workplace: Risk factors and prevention strategies*. US

    Department of Health and Human Services, Centers for Disease Control and

    Prevention, National Institute for Occupational Safety and Health, Division of

    Safety Research. Retrieved from

    https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=163791

Jex, S. M., & Beehr, T. A. (1991). Emerging theoretical and methodological issues in the

    study of work-related stress. *Research in Personnel and Human Resources

    Management*, *9*(31), l–365.

Keashly, L. (2001). Interpersonal and systemic aspects of emotional abuse at work: The

    target's perspective. *Violence and Victims*, *16*(3), 233–268.

Keashly, L. (2001). Interpersonal and systemic aspects of emotional abuse at work: The

    target's perspective. *Violence and Victims*, *16*(3), 233–268.

Keashly, L., & Jagatic, K. (2002). 2 By any other name. *Bullying and emotional abuse in

    the workplace*, 31.

Keashly, L., Hunter, S., & Harvey, S. (1997). Abusive interaction and role state stressors:

    Relative impact on student residence assistant stress and work attitudes. *Work &

    Stress*, *11*(2), 175–185. https://doi.org/10.1080/02678379708256833

Kelloway, E. K. (1998). *Using LISTREL for structural equation modeling: A researcher's*

guide. Thousand Oaks, CA: Sage.

Kelloway, E. K. (2015). Using Mplus for structural equation modeling.

Kelloway, E. K., Barling, J., & Hurrell Jr, J. J. (2006a). *Handbook of workplace violence.*
Sage Publications. Retrieved from
http://books.google.com/books?hl=en&lr=&id=Qbl1AwAAQBAJ&oi=fnd&pg=P
P1&dq=%22of+this+chapter+was+supported+by+grants+from+the+Arts+Researc
h%22+%22of+aggressive+behavior,+data+are+lacking+that+reflect+the%22+%2
2of+aggression.+Fourth,+we+report+prevalence+rates+and%22+&ots=NRdXrPa
kEn&sig=U9UP4ct8Pm2oHT8QcCdRv8EbyH0

Kelloway, E. K., Barling, J., & Hurrell Jr, J. J. (2006b). Prevalence of Workplace
Aggression in the U.S. Workforce. In *Handbook of Workplace Violence.* Sage
Publications.

Kelloway, E. K., Calnan, K., Mullen, J., & Teed, M. (2013). SAV-T FIRST. *Improving
Employee Health and Well Being*, 137.

Kent, S., Troth, A. C., & Jordan, P. J. (2014). Mapping the Terrain of Aggression Within
the Workplace Context. *Emotions and the Organizational Fabric (Research on
Emotion in Organizations, Volume 10) Emerald Group Publishing Limited*, *10*,
111–136.

Kessler, S. R., Spector, P. E., Chang, C.-H., & Parr, A. D. (2008). Organizational
violence and aggression: Development of the three-factor Violence Climate
Survey. *Work & Stress*, *22*(2), 108–124.
https://doi.org/10.1080/02678370802187926

Lapierre, L. M., Spector, P. E., & Leck, J. D. (2005). Sexual Versus Nonsexual

Workplace Aggression and Victims' Overall Job Satisfaction: A Meta-Analysis.

Journal of Occupational Health Psychology, *10*(2), 155–169.

https://doi.org/10.1037/1076-8998.10.2.155

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing

company. Retrieved from https://books.google.ca/books?hl=en&lr=&id=i-

ySQQuUpr8C&oi=fnd&pg=PR5&dq=Lazarus,+R.+S.,+%26+Folkman,+S.+(198

4).+Stress,+appraisal,+and+coping.+New+York:+Springer.&ots=DeJSlsicSg&sig

=luBqkVU0xLcGEsKhEGx9fIJ2QME

LeBlanc, M. M., & Kelloway, E. K. (2002). Predictors and outcomes of workplace

violence and aggression. *Journal of Applied Psychology*, *87*(3), 444–453.

https://doi.org/10.1037//0021-9010.87.3.444

Lee, R.M. (1993). *Doing research on sensitive topics*. Thousand Oaks, CA: Sage.

Lengnick-Hall, M. L. (1995). Sexual harassment research: A methodological critique.

Personnel Psychology, *48*(4), 841–864.

Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not

to parcel: Exploring the question, weighing the merits. *Structural equation

modeling*, *9*(2), 151-173.

Matsunaga, M. (2008). Item parceling in structural equation modeling: A primer.

Communication Methods and Measures, *2*(4), 260-293.

McDiarmid, M. A., & Condon, M. (2005). Organizational safety culture/climate and

worker compliance with hazardous drug guidelines: lessons from the blood-borne

pathogen experience. *Journal of Occupational and Environmental Medicine*, *47*(7), 740–749.

Mikkelsen, E. G., & Einarsen, S. ale. (2001). Bullying in Danish work-life: Prevalence and health correlates. *European Journal of Work and Organizational Psychology*, *10*(4), 393–413.

Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, *34*(1), 99–109.

Neuman, J. H. (2012). Workplace Violence and Aggression: When You Do Not Want Your Company on the News. In N. P. Reilly, M. J. Sirgy, & C. A. Gorman (Eds.), *Work and Quality of Life* (pp. 343–373). Dordrecht: Springer Netherlands. Retrieved from http://www.springerlink.com/index/10.1007/978-94-007-4059-4_19

Neuman, J. H., & Baron, R. A. (1998). Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes, and preferred targets. *Journal of Management*, *24*(3), 391–419.

Neuman, J. H., & Baron, R. A. (2005). Aggression in the workplace: A social-psychological perspective. *Counterproductive Work Behavior: Investigations of Actors and Targets*, *7*, 13–40.

Niedhammer, I., David, S., Degioanni, S., Drummond, A., & Philip, P. (2009). Workplace bullying and sleep disturbances: findings from a large scale cross-sectional survey in the French working population. *Sleep*, *32*(9), 1211–9.

O'Leary-Kelly, A. M., Griffin, R. W., & Glew, D. J. (1996). Organization-motivated

aggression: A research framework. *Academy of Management Review*, *21*(1), 225–

253.

Ostroff, C., Kinicki, A. J., & Tamkins, M. M. (2003). *Organizational culture and climate*.

Wiley Online Library. Retrieved from

http://onlinelibrary.wiley.com/doi/10.1002/0471264385.wei1222/full

Pearson, C. M., & Porath, C. L. (2005). On the nature, consequences and remedies of

workplace incivility: No time for "nice"? Think again. *The Academy of*

Management Executive, *19*(1), 7–18.

R Core Team (2016). R: A language and environment for statistical computing. R

Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-

project.org/.

Raver, J. L., & Barling, J. (2008). Workplace aggression and conflict: Constructs,

commonalities, and challenges for future inquiry. Retrieved from

http://psycnet.apa.org/psycinfo/2007-15681-007

Rayner, C. (1997). The Incidence of Workplace Bullying. *Journal of Community &*

Applied Social Psychology, *7*(3), 199–208. https://doi.org/10.1002/(SICI)1099-

1298(199706)7:3<199::AID-CASP418>3.0.CO;2-H

Rogers, K.-A., & Kelloway, E. K. (1997). Violence at work: personal and organizational

outcomes. *Journal of Occupational Health Psychology*, *2*(1), 63.

Rogers, W. M., & Schmitt, N. (2004). Parameter recovery and model fit using

multidimensional composites: A comparison of four empirical parceling algorithms.

Multivariate Behavioral Research, *39*, 379–412.

Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika*, *66*(4), 507-514.

Schat, A. C. H., & Kelloway, E. K. (2003). Reducing the adverse consequences of workplace aggression and violence: The buffering effects of organizational support. *Journal of Occupational Health Psychology*, *8*(2), 110–122. https://doi.org/10.1037/1076-8998.8.2.110

Schat, A. C., & Kelloway, E. K. (2000). Effects of perceived control on the outcomes of workplace aggression and violence. *Journal of Occupational Health Psychology*, *5*(3), 386.

Schat, A. C., & Kelloway, E. K. (2005). Workplace aggression. *Handbook of Work Stress*, 189–218.

Schein, E. H. (1990). *Organizational culture* (Vol. 45, No. 2, p. 109). American Psychological Association.

Schneider, B. (2000). The psychological life of organizations. *Handbook of organizational culture and climate*, 17-21.

Schneider, B., & Hall, D. T. (1972). Toward specifying the concept of work climate: A study of Roman Catholic diocesan priests. *Journal of Applied Psychology*, *56*(6), 447.

Schwartz, J. E., & Stone, A. A. (1998). Strategies for analyzing ecological momentary assessment data. *Health Psychology, 17*, 6-16.

Siu, O., Phillips, D. R., & Leung, T. (2004). Safety climate and safety performance among construction workers in Hong Kong: the role of psychological strains as mediators. *Accident Analysis & Prevention*, *36*(3), 359–366.

Snyder, L. A., Chen, P. Y., Grubb, P. L., Roberts, R. K., Sauter, S. L., & Swanson, N. G. (2005). Workplace aggression and violence against individuals and organizations: Causes, consequences, and interventions. In *Research in Occupational Stress and Well-being* (Vol. 4, pp. 1–65). Bingley: Emerald (MCB UP). Retrieved from http://www.emeraldinsight.com/10.1016/S1479-3555(04)04001-6

Spector, P. E., & Fox, S. (2005). Concluding Thoughts: Where Do We Go From Here? In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets.* (pp. 297–305). Washington: American Psychological Association. Retrieved from http://content.apa.org/books/10893-012

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, *3*(4), 356.

Spector, P. E., Coulter, M. L., Stockwell, H. G., & Matz, M. W. (2007). Perceived violence climate: A new construct and its relationship to workplace physical violence and verbal aggression, and their potential consequences. *Work & Stress*, *21*(2), 117–130. https://doi.org/10.1080/02678370701410007

Steiger, J. H., & Lind, J. C. (1980). Statistically based tests for the number of common factors. In *annual meeting of the Psychometric Society, Iowa City, IA* (Vol. 758, pp. 424-453).

Steinert, Jason K., "Workplace Aggression: A Reconceptualization Of The Construct & And Exploration Of Strain Based Outcomes" (2015). *FIU Electronic theses and Dissertations.* Paper 1798. http://digitalcommons.fiu.edu/etd/1798

Sygnatur, E. F., & Toscano, G. A. (2000). Work-related homicides: the facts. *Compensation and Working Conditions*, *2*, 3–8.

Tabachnick, B. G., & Fidell, L. S. (2013). Using Multivariate Statistics, 6th International edition (cover) edn.

Tucker, L. R., & Lewis, C. (1973). The reliability coefficient for maximum likelihood factor analysis. Psychometrika, *38*, 1-10

Van Emmerik, I. H., Euwema, M. C., & Bakker, A. B. (2007). Threats of workplace violence and the buffering effect of social support. *Group & Organization Management*, *32*(2), 152–175.

Vartia, M. A. (2001). Consequences of workplace bullying with respect to the well-being of its targets and the observers of bullying. *Scandinavian Journal of Work, Environment & Health*, 63–69.

Wager, N., Fieldman, G., & Hussey, T. (2003). The effect on ambulatory blood pressure of working under favourably and unfavourably perceived supervisors. *Occupational and Environmental Medicine*, *60*(7), 468–474.

Willness, C. R., Steel, P., & Lee, K. (2007). A meta-analysis of the antecedents and consequences of workplace sexual harassment. *Personnel Psychology*, *60*(1), 127–162.

Zhou, Z. E., Yang, L.-Q., & Spector, P. E. (2015). Political skill: A proactive inhibitor of

    workplace aggression exposure and an active buffer of the aggression-strain

    relationship. *Journal of Occupational Health Psychology*, *20*(4), 405–419.

    https://doi.org/10.1037/a0039004

Zohar, D. (2014). Safety climate: Conceptualization, measurement, and

    improvement. *The Oxford handbook of organizational climate and culture*, 317-

    334.

Zohar, D., & Luria, G. (2005). A multilevel model of safety climate: Cross-level

    relationships between organization and group-level climates. *Journal of Applied*

    Psychology, 90, 616-628.