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# An "I" for an "I": A Systematic Review and Meta-Analysis of Instigated and Reciprocal Incivility

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### Abstract

Incivility and its negative impacts on individuals, teams, and organizations have been widely studied in workplace contexts, but the literature lacks a comprehensive understanding of incivility from the instigator's perspective. This meta-analysis of instigated incivility included 35,344 workers from 76 independent samples. Results showed that instigated incivility was related to several correlates including psychological ill-being,  $\rho = .36$ , and well-being,  $\rho = -.17$ ; physical well-being,  $\rho = -.25$ ; personal dispositions that are risk factors,  $\rho = .47$ , and preventative factors,  $\rho = -.34$ ; negative,  $\rho = .28$ , and positive,  $\rho = -.33$ , job attitudes; positive team characteristics,  $\rho = -.28$ ; job demands,  $\rho = .10$ ; and experienced,  $\rho = .61$ , and observed,  $\rho = .58$ , incivility. Moderator analyses showed that the relationship between experienced and instigated incivility was weaker for older participants and under conditions of greater job control and work group civility.

*Keywords:* meta-analysis, incivility, instigator

## **An “I” for an “I”:**

### **A Systematic Review and Meta-Analysis of Instigated and Reciprocal Incivility**

Incivility is pervasive in workplace contexts and its impact on targets has been widely studied. However, this vast body of literature has not yet come to a conclusive understanding of what contributes to instigating incivility. Moreover, the existing literature demonstrates that experiencing or observing incivility often leads to instigating incivility, but the conditions under which this is more or less likely are yet unknown. A better understanding of the antecedents of instigated incivility and the moderators of the relationship between experienced and instigated incivility has important implications for both researchers and practitioners. In this meta-analysis, we systematically review the literature that examines the instigators of workplace incivility, with a particular focus on the factors that influence instigated incivility both as an isolated incident and in response to uncivil behavior from others.

The present meta-analysis offers important contributions to the literature on workplace mistreatment specifically, and the organizational science literature more broadly. Though empirical examinations of incivility from the instigator’s perspective are numerous enough to demonstrate commonalities among key relationships, there does not yet exist a systematic review of this literature and a set of established effect sizes between instigated incivility and its correlates. Moreover, this work is the first to use meta-analytic techniques to empirically explore the moderators of the relationships between experienced or observed incivility and instigated incivility, highlighting key factors that increase the likelihood of incivility targets becoming incivility instigators. Additionally, Andersson and Pearson’s (1999) concept of “departure points” within reciprocal incivility - points at which targets withdraw from the uncivil exchange and do not instigate incivility in turn - has been all but ignored in subsequent research (Cortina et

al., 2017). The test of moderators of the relationship between experienced and instigated incivility in the present work will identify the factors that lead to such departure, responding to Cortina et al.'s (2017) call for an investigation of departure points in the reciprocal incivility cycle. Finally, the strength of meta-analytic relationships between instigated incivility and its correlates will provide evidence of the relative importance of different antecedents and their interaction in influencing workplace incivility (Hershcovis et al., 2007). Understanding the likely predictors of incivility instigation and the moderators of the relationship between experienced and instigated incivility can inform the level at which targeted intervention efforts may be most successful.

### **An Organizing Framework of Instigated Incivility**

In their formative paper, Andersson and Pearson (1999) define incivility as “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviors are characteristically rude and discourteous, displaying a lack of regard for others” (p. 457). Subsequent scholars have adopted this exact definition of incivility or defined the construct similarly (see Cortina et al., 2017). Compared to other forms of workplace mistreatment, uncivil behaviors at work are less intense and more ambiguous, and thus, more pervasive in organizations. It is estimated that 98% of workers have experienced incivility in the past and 50% of all workers experience incivility on a weekly basis (Porath & Pearson, 2013).

As there does not yet exist an overarching theory that captures the entire nomological network of workplace incivility (Schilpzand et al., 2016), we put forth an organizing framework of incivility. Based on empirical findings put forth in this review, we categorize the antecedents of instigated incivility as *risk factors* - those that are associated with greater likelihood of

incivility instigation - and *preventative factors* - those that are associated with less likelihood of incivility instigation. Though this framework may seem to imply that incivility instigation is dichotomous (e.g., individuals either are or are not at risk for instigating incivility), we utilize this framework to instead refer to an individual's evolving propensity to instigate incivility. Risk factors are associated with a higher propensity and preventative factors are associated with a lower propensity, and these factors may interact to have unique relationships with incivility instigation.<sup>1</sup>

### **Predictors of Incivility**

Andersson and Pearson (1999) note that incivility is a social process that involves two or more parties: targets, observers, and instigators. As the focus of the present meta-analysis is incivility instigation, we briefly review the literature related to targets and observers before discussing the literature related to instigators in greater depth.

#### **Predictors from Target's and Observer's Perspectives**

Most of the literature on incivility has focused on the perspective of the target, and researchers have identified specific individual and situational antecedents to experiencing incivility. For instance, work on selective incivility has demonstrated that incivility serves as a covert form of discrimination (Cortina et al., 2013), as employees with stigmatized identities are more likely to be targeted (see McCord et al., 2018). Furthermore, studies have shown that employees who are younger (Leiter et al., 2010), belong to a racial minority group (Cortina et al., 2013), have larger bodies (K. A. Sliter et al., 2012), are disagreeable or neurotic (Milam et al., 2009), and engage in counterproductive work behaviors (Meier & Spector, 2013) are targeted at disproportionate rates. Research examining contextual factors that impact the likelihood of

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<sup>1</sup> We thank the anonymous reviewer that noted this limitation of our organizing framework.

experiencing incivility is less common but has demonstrated that workgroup norms for civility reduce this likelihood (Walsh et al., 2012).

The literature related to observers is dominated by a focus on the negative outcomes of witnessing incivility. Relevant to the present study, however, this literature does show that observing incivility from a variety of sources is associated with instigating incivility in turn (Shadwick, 2018; Torkelson, Holm, Bäckström, et al., 2016).

### **Predictors from the Instigator's Perspective**

Though the instigator's perspective is not represented in the literature to the same extent as the target's perspective, enough work has been done to suggest some consistent relationships between incivility instigation and other phenomena. This work has largely focused on the antecedents of instigators' uncivil conduct, rather than its consequences.

### ***Well-Being***

Past research conceptualizes well-being in many ways and generally shows that well-being serves as a preventative factor such that individuals with greater well-being are less likely to instigate incivility (Torkelson, Holm, & Bäckström, 2016). Findings related to mental health and other forms of psychological well-being demonstrate that better psychological well-being is associated with less incivility instigation (LeBlanc, 2011). The literature has demonstrated consistent relationships between incivility instigation and specific psychological states or moods. Many studies found a positive relationship between unidimensional burnout (Maslach & Jackson, 1984) and instigated incivility (Loh & Loi, 2018) as well as the components of burnout and instigated incivility (Aboodi & Allameh, 2019). Findings uniformly suggest that negative psychological well-being (Holm et al., 2019), affect (Loi & Golledge, 2018; Peng, 2020), and

moods (Miranda & Welbourne, 2020; Torres et al., 2017) are positively related to incivility instigation. Therefore, we predict the following:

*Hypothesis 1.* Poorer psychological well-being and negative psychological states will put individuals at *risk* for incivility instigation (H1a), and better psychological well-being and positive psychological states will *prevent* individuals from incivility instigation (H1b).

Research has found that better physical health is associated with a lower likelihood of incivility instigation (Zhou, 2015). By contrast, instigating incivility is more likely under greater state physical exhaustion (Meier & Gross, 2015), fatigue (Peng, 2020), and poorer sleep quality (Barnes et al., 2016). Therefore, we predict the following:

*Hypothesis 2.* Poorer physical well-being will put individuals at greater *risk* for incivility instigation (H2a), and better physical well-being will *prevent* incivility instigation (H2b).

### ***Personal Dispositions***

The literature has examined a wide range of personal dispositions as they relate to incivility instigation, and much of this work included some or all of the personality traits within the Five Factor Model of personality (Norman, 1963; Tupes & Christal, 1992). This work shows that agreeableness, conscientiousness, emotional stability, and openness to experience are negatively related to instigated incivility, but findings related to extraversion are mixed (e.g., Gray et al., 2017; Krishnan, 2016).

Research has also examined how personal dispositions outside of the Five Factor Model influence instigated incivility. One such example is the positive relationship between the triad of malevolent personality traits - Machiavellianism, psychopathy, and narcissism – and instigated incivility (Lata & Chaudhary, 2020; Min et al., 2019). Other work found that individuals were more likely to instigate incivility when high in trait anger or aggression (Gray et al., 2017;

Miranda & Welbourne, 2020), entitlement (Khalid & Gulzar, 2019), and hostile attribution bias (Manegold, 2014; Peng, 2020), or the extent to which people attribute negative events to others' hostile intentions (Crick & Dodge, 1996). Participants higher in emotional intelligence were less likely to instigate incivility (Loi & Golledge, 2018; Ricciotti, 2016). Social desirability was both negatively (Miranda & Welbourne, 2020) and positively (Manegold, 2014) related to instigated incivility. Therefore, we predict the following:

*Hypothesis 3.* Personal dispositions will influence incivility instigation, such that certain traits will put individuals at greater *risk* for instigation (e.g., narcissism; H3a) and certain traits will *prevent* (e.g., emotional intelligence; H3b) instigation.

### ***Job Attitudes***

Relationships between employee attitudes and incivility instigation are largely consistent. Individuals who were more committed to their organization (Gray et al., 2017; Smidt et al., 2016) and perceived more organizational fairness and justice (Aboodi & Allameh, 2019; Jiménez et al., 2018) were less likely to instigate incivility at work. Relatedly, employees who perceived a violation of their psychological contract with the organization were more likely to instigate incivility (Gray et al., 2017; Sears & Humiston, 2015). Studies of job satisfaction found that more satisfied employees were less likely to behave in an uncivil manner at work (Aboodi & Allameh, 2019; Holm et al., 2019). Conversely, employees with a greater sense of job insecurity (Gray et al., 2017; Torkelson, Holm, Bäckström, et al., 2016) and greater intentions to turn over (Jiménez et al., 2018) were more likely to instigate incivility. Finally, employees who experienced forms of conflict between work and nonwork were more likely to instigate incivility at work (Aboodi & Allameh, 2019). Therefore, we predict the following:



*Hypothesis 4.* Negative job attitudes will put individuals at greater *risk* for incivility instigation (H4a), and positive job attitudes will *prevent* incivility instigation (H4b).

### **Demographics**

Results related to the impact of job-related demographic characteristics on instigated incivility were mixed, with many studies reporting bivariate relationships that did not meet statistical significance. Whereas work has found that experience providing customer service and job knowledge were negatively related to instigating incivility (M. Sliter & Jones, 2016), general work experience was unrelated in all other samples (Ricciotti, 2016). Relatedly, findings with respect to job tenure were mixed, with some studies suggesting incivility instigation related positively (Krishnan, 2016) and negatively (Birkeland & Nerstad, 2016; Sears & Humiston, 2015) to job tenure, though most did not find any relationship between the two constructs (Aboodi & Allameh, 2019; Lata & Chaudhary, 2020).

Many past studies reported bivariate relationships between instigated incivility and age and gender. Some studies found that older employees were less likely to act uncivil toward others (Aboodi & Allameh, 2019; Min et al., 2019) though most found no relationship related to age (Lata & Chaudhary, 2020; Peng, 2020). A small number of studies reported that men were more likely to instigate incivility than women (Birkeland & Nerstad, 2016; Krishnan, 2016) but a large majority found no relationship (Lata & Chaudhary, 2020; Peng, 2020). Education was found to be positively related (Khalid & Gulzar, 2019), negatively related (Aboodi & Allameh, 2019), and unrelated (Lata & Chaudhary, 2020) to instigated incivility. Race was largely found to be unrelated to incivility instigation (Peng, 2020; Ricciotti, 2016), though one study found that White participants instigated incivility more than other racial/ethnic groups (Roberts, 2013).

Given the mixed results in the literature, we have no basis for making a prediction in advance and therefore include the effect of demographic characteristics on instigated incivility as a research question.

*Research Question 1.* How do demographic characteristics influence the likelihood of instigating incivility?

### **Organizational-Level Antecedents**

Few studies examined the impact of organizational-level characteristics on individual reports of instigating incivility. Employees who perceived a strong organizational climate for civility were less likely to instigate incivility at work (Leiter et al., 2011, 2012). Conversely, employees who perceived more organizational change were more likely to behave in an uncivil manner (Roberts, 2013; Torkelson, Holm, Bäckström, et al., 2016). Therefore, we predict the following:

*Hypothesis 5.* More negative work situations at the organizational levels (e.g., more organizational change) will put individuals at greater *risk* for incivility instigation (H5a), and more positive work situations (e.g., civility climate) will *prevent* incivility instigation (H5b).

### **Team Characteristics**

Few studies have examined the influence of team characteristics on incivility instigation. This work demonstrates that incivility is more likely under high levels of team interpersonal conflict (Roberts, 2013) and less likely under conditions of greater coworker and supervisor support (Holm et al., 2019; Torkelson, Holm, Bäckström, et al., 2016), greater trust in one's manager (Leiter et al., 2012, 2015), and more positive civility climates within the team (Walsh et al., 2020). Employees' perceptions of leader-member exchange from their supervisors were

negatively related (Nandedkar, 2016) or unrelated (Sears & Humiston, 2015) to instigated incivility. Therefore, we predict the following:

*Hypothesis 6.* More negative work situations at the team level (e.g., greater interpersonal conflict) will put individuals at greater *risk* for incivility instigation (H6a), and more positive work situations (e.g., support) will *prevent* incivility instigation (H6b).

### **Job Characteristics**

Findings related to the impact of job characteristics on instigating incivility were mixed in the literature. Most work in this area utilized the job demands-control model (Karasek, 1979) to explain job characteristics. This model describes the differential effects of job demands and control/decision latitude on stress and suggests that employees with higher demands and lower levels of control will experience greater stress and more negative outcomes. Though findings largely supported this model in that greater job control and fewer job demands were related to less instigation of incivility, there were contradictory findings. Multiple studies reported the expected negative relationship between job control and instigating incivility (Jiménez et al., 2018; Krishnan, 2016), though some found the opposite (LeBlanc, 2011).

The impact of job demands on instigated incivility demonstrated that greater job demands led to more instigated incivility (Aboodi & Allameh, 2019). Greater workload was positively related to a greater likelihood of instigating incivility (Jiménez et al., 2018; Peng, 2020). A number of studies found that hours worked was unrelated to instigated incivility (Lata & Chaudhary, 2020; Peng, 2020), though some found a positive relationship between weekly work hours and instigated incivility (Birkeland & Nerstad, 2016). Therefore, we predict the following:

*Hypothesis 7.* Job characteristics will influence the likelihood of instigating incivility, such that demanding job characteristics (e.g., workload, work hours) will put individuals

at greater *risk* for incivility instigation (H7a) and job resources (e.g., control) will *prevent* incivility instigation (H7b).

### **Reciprocal Incivility**

Andersson and Pearson (1999) introduced the concept of the incivility spiral, which occurs when incivility toward a target leads the target to perpetrate incivility themselves, and a chain of negative interpersonal interactions may eventually accumulate over time to yield coercive and violent employee behavior. However, these authors note that such spiraling is relatively uncommon, and the low frequency of unambiguous, violent behavior in organizations supports this claim (Schat et al., 2006). Pearson and colleagues (2000) expanded upon the incivility spiral concept, introducing three other uncivil exchange processes that do not escalate to more severe forms of mistreatment. First, *non-escalating uncivil exchange* occurs between two parties, each considered both a target and an instigator. Two employees engage in uncivil behavior toward one another, but such behavior does not escalate into more intense forms of mistreatment, such as bullying or harassment. Second, *direct displacement* occurs when two employees engage in non-escalating uncivil exchange and the target displaces their desire to reciprocate incivility onto additional, uninvolved employees. Third, *indirect displacement* occurs between a target, an instigator, and one or more observers. After witnessing an uncivil exchange between an instigator and target, the observer(s) then model that behavior and enact incivility toward others. We refer to these three exchange processes collectively as *reciprocal incivility*.

Many studies tested the relationship between experienced and instigated incivility, and all but one (Shadwick, 2018) found a significant and positive relationship between experiencing incivility at work and instigating incivility oneself. Some of this work also differentiates between the source of the experienced incivility, such as incivility from one's coworkers and supervisors

(considered “insiders”) or incivility from consumers of the organization’s goods or services (e.g., customers, patients, visitors; considered “outsiders”). Across studies, instigating incivility was significantly and positively related to experienced incivility (Peng, 2020; Walsh et al., 2020).

Experienced incivility from insiders is generally positively related to instigated incivility. Experiencing incivility from coworkers, specifically, was positively associated with instigating incivility oneself (Jiménez et al., 2018). Incivility from one’s supervisor or other superiors was also positively associated with instigating incivility (Jiménez et al., 2018; Smidt et al., 2016). Experienced incivility from outsiders, or non-organizational members who interact with employees, is also generally associated with higher rates of instigated incivility. Past work has demonstrated the positive relationship between instigated incivility and incivility from customers (Aboodi & Allameh, 2019; Torres et al., 2017) as well as from patients and visitors in a healthcare setting (Zhou, 2015). Therefore, we predict the following:

*Hypothesis 8.* Experiencing incivility will put individuals at *risk* for incivility instigation.

Compared to experiencing incivility directly, less work examined the influence of observing an uncivil interaction between others on instigating incivility oneself. All but one study (Shadwick, 2018) demonstrated that observing incivility from others was associated with more instigated incivility. This pattern was consistent when the source of the incivility was coworkers and supervisors (Holm et al., 2019; Torkelson, Holm, & Bäckström, 2016) as well as customers (Aboodi & Allameh, 2019). Therefore, we predict the following:

*Hypothesis 9.* Observing incivility will put individuals at *risk* for incivility instigation.

The theoretical tenets of Andersson and Pearson’s (1999) incivility spiral constitute a number of individual and situational characteristics that are proposed to affect the likelihood of reciprocal incivility. These tenets are supported by our organizing framework, such that

experienced incivility is a risk factor that increases the likelihood of instigating incivility, and additional risk and preventative factors further exacerbate or ameliorate this relationship.

However, little work has been done to identify and examine moderators of the reciprocal incivility relationship. Indeed, only two studies in the included literature have tested mediating or moderating effects on the relationship between experienced and instigated workplace incivility; both demonstrated that the relationship between experienced and instigated incivility was greater under conditions of higher burnout (Kim & Qu, 2019; Loh & Loi, 2018).

As past literature has not empirically tested moderators of reciprocal incivility aside from burnout, and the extent to which we are able to test moderating constructs is dependent on available data, we pose the following research question:

*Research Question 2.* What constructs moderate the relationship between experienced and instigated incivility?

## **Method**

### **Study Retrieval**

The literature search began in September 2019 and concluded in October 2020. We first collected all empirical work that had cited the following incivility and civility scales: the Uncivil Workplace Behavior Questionnaire (UWBQ; Gray et al., 2017; Martin & Hine, 2005), the Workplace Incivility Scale (WIS; Cortina et al., 2001) and its adaptation by Blau and Andersson (2005), the Nursing Incivility Scale (Guidroz et al., 2010), the Incivility from Customers Scale (Wilson & Holmval, 2013), and the Civility Norms Questionnaire (Walsh et al., 2012). We then searched several online databases and programs using the following terms: incivility, uncivil, civility, civil. We did not include terms that reflect the instigator's perspective due to the variety of terms used to refer to instigation (e.g., instigated, enacted, perpetrated; we screened for this

later). We searched databases including PsycNet, Google Scholar, and ProQuest dissertations and theses, using all fields. We also searched for the key words in conference programs for the Society for Industrial and Organizational Psychology Annual Meeting; the Academy of Management Annual Meeting; and the American Psychological Association Work, Stress, and Health Conference beginning in 2010 and contacted authors whose identified conference presentations were not otherwise available. We then searched Google for all relevant search terms to discover resources that may not have been indexed in other databases, including dissertations and theses. Finally, we contacted authors that were identified multiple times in the collected literature and requested their or their colleagues' unpublished data or reports.

### **Study Selection**

We included empirical work in this meta-analysis according to six inclusion criteria, resulting in 76 unique samples across 44 published and 26 unpublished (e.g., draft manuscripts, theses, dissertations, conference presentations) empirical reports. A table outlining these criteria and their application is provided in supplemental Appendix A. First, the work must have included the search terms of interest, which yielded 1,494 studies. Second, we retained only literature that provided sufficient information in English, resulting in the exclusion of 87 studies. Third, the studies needed to include at least one measure of incivility from the instigator's perspective. The 601 studies excluded due to this criterion measured incivility from the perspective of a target or observer of incivility, rather than an instigator. Fourth, the studies must have used an operationalization of incivility consistent of those with past research (i.e., low-intensity and ambiguous); we removed 486 studies for including only a type of mistreatment other than incivility, such as bullying, harassment, or aggression. Fifth, the studies must have examined incivility within a workplace context, resulting in the exclusion of 10 studies. Sixth

and finally, the authors of each study had to report sample sizes and data sufficient to calculate a Pearson correlation coefficient  $r$ . An additional 203 articles lacked empirical quantitative data for meta-analysis. Of the remaining literature, 37 were duplicates and were removed. References for the remaining 76 samples are presented in supplemental Appendix B and their characteristics are presented in supplemental Appendix C.

### **Effect Size Coding**

Each study was coded by two individuals, the first author and one research assistant trained in meta-analytic coding. Both concurrent and time-lagged correlates with instigated incivility as the outcome were included. We coded effect sizes at the most detailed level possible and grouped them into categories after reviewing the number of available effects for each construct. After effect size coding, but prior to reconciling coding disagreements, we assessed interrater agreement on a random sample of 10% of the effect sizes across all coders (82 effect sizes). We conceptualize agreement as the extent to which coders reached the same conclusion regarding characteristics of the effect size that required high levels of subjective inference. Such high-level characteristics included the names of constructs, classes of constructs (e.g., individual versus organizational characteristics), and how constructs are conceptualized (e.g., trait versus state) in a particular study. We evaluated the percentage of effect sizes where coders agreed on the *specific* classification of the construct; for example, a construct was considered by both coders to be indicative of the personality trait extraversion. We also evaluated the percentage of effect sizes where coders agreed on the *general* classification of the construct but may have disagreed on the specific classification; for example, a construct was considered by both coders to be indicative of a personality trait, but there was disagreement as to what particular personality trait the construct represented. Among the sampled effect sizes, agreement between coders at the



more specific level was 79%, whereas agreement between coders at the more general level was 89%. Instances of disagreement were due to transcription error, incorrect construct conceptualization (e.g., trait versus state, team- versus organizational-level), or accidental omission of effects.

The first author independently reconciled any coding disagreements on characteristics of the effect size that required low levels of subjective inference (e.g., sample size, year of publication) by consulting the literature in question. Any disagreements that were not readily addressed by the literature in question were reconciled by careful discussion to reach consensus. The reconciled subsets were then combined to form a comprehensive codebook of the body of literature, which was reviewed by the first author for remaining discrepancies or errors. All effects were reversed and/or converted to a Pearson correlation coefficient as needed to maintain consistency.

### **Statistical Methods**

We conducted all analyses using psychometric meta-analysis estimation (Schmidt & Hunter, 2015) in R using the *psychmeta* package (Dahlke & Wiernik, 2018).<sup>2</sup> Correlations across samples were averaged, weighted by sample size, and corrected for measurement reliability using the individual correction method (Gillespie et al., 2002; Schmidt & Hunter, 2015). Dependency from effects within the same study was corrected by forming composites (Dahlke & Wiernik, 2018). All estimates are reported according to guidance from the American Psychological Association (APA; 2020) and commentary by Kepes and colleagues (2013). Meta-analytic estimates for main effects are not reported if they were calculated using effects from fewer than three samples, consistent with previous meta-analyses (Berry et al., 2007); for

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<sup>2</sup> Though random-effects models, as compared to fixed-effects models, may produce biased estimates when  $k < 20$  (Field, 2001), we maintain that a random-effects model is more consistent with the research questions posed in this review and that the external generalizability provided by random-effects models is preferred.

consistency, we apply the same rule to meta-analytic regression results. The homogeneity statistics  $Q$  and  $I^2$  were calculated to determine the variation in effects between studies. A significant  $Q$  statistic represents heterogeneity in the effect size that is attributable to true population differences and is considered an indicator for the presence of between-sample moderators (Huedo-Medina et al., 2006). The  $I^2$  statistic represents the proportion of true variance to total variance, ranging from 0 to 100 with higher scores representing greater heterogeneity (Huedo-Medina et al., 2006).

For the moderator constructs addressed by Research Question 2, we included the reported mean of each available construct as a study-level variable. Many of these values required standardization due to their measurement on Likert-type scales with inconsistent anchors. To standardize these values, we subtracted each value from the lower anchor and divided by the upper anchor to arrive at a proportion of the scale total ranging from 0 to 1 that could be compared across measurement instruments. The moderating effects of these constructs were assessed with mixed-effects meta-regression using restricted maximum likelihood estimation.

In addition, we assessed the impact of methodological moderators for all hypothesized main effects, as available. Methodological moderators included publication status (published or unpublished), research design (prospective or concurrent), and measure of instigated incivility (derived from Cortina et al.'s WIS, 2001 or Blau & Andersson's UWBQ, 1995).

### *Sensitivity Analyses*

Prior to reviewing the results of hypothesis tests, we conducted sensitivity analyses to test for outlier and publication bias using the graphical and quantitative triangulation approach recommended by Kepes and colleagues (2012). We first identified possible issues by examining subgroup forest plots, then used the "leave-one-out" and cumulative meta-analysis methods to

assess both outlier and publication biases. Finally, we tested the possible influence of publication bias by conducting subgroup meta-analyses for published and unpublished works for all hypothesized main effects.

## Results

Table 1 summarizes the results between hypothesized predictors and instigated incivility. Though we present the hypothesized relationships between instigated incivility and overall categories of risk factors in this section, there was considerable variability among the effects of specific risk factors, as shown in Table 1.

At the individual level, psychological ill-being risk factors had a significant positive relationship with instigated incivility, with an overall effect size of  $\rho = .36$ ,  $SD_{\rho} = .15$ ,  $k = 36$ , providing support for Hypothesis 1a. Conversely, preventative psychological well-being had a significant negative relationship with instigated incivility, with an overall effect size of  $\rho = -.17$ ,  $SD_{\rho} = .18$ ,  $k = 21$ , providing support for Hypothesis 1b. Results for Hypothesis 2a are not reported because there was an insufficient number of studies that assessed the relationship between physical well-being risk factors and instigated incivility. In support of Hypothesis 2b, preventative physical well-being had a significant negative relationship with instigated incivility, with an overall effect size of  $\rho = -.25$ ,  $SD_{\rho} = .09$ ,  $k = 5$ . In support of Hypothesis 3a, personal disposition risk factors had a significant positive relationship with instigated incivility, with an overall effect size of  $\rho = .47$ ,  $SD_{\rho} = .24$ ,  $k = 19$ . Conversely, preventative personal dispositions had a significant negative relationship with instigated incivility, with an overall effect size of  $\rho = -.34$ ,  $SD_{\rho} = .18$ ,  $k = 13$ , providing support for Hypothesis 3b. In support of Hypothesis 4a, job attitude risk factors had a significant positive relationship with instigated incivility, with an overall effect size of  $\rho = .28$ ,  $SD_{\rho} = .09$ ,  $k = 16$ . Preventative job attitudes had a significant

negative relationship with instigated incivility, with an overall effect size of  $\rho = -.33$ ,  $SD_{\rho} = .12$ ,  $k = 24$ , providing support for Hypothesis 4b.

At the situational level, preventative team characteristics (e.g., work group civility, coworker support) had a significant negative relationship with instigated incivility, with an overall effect size of  $\rho = -.28$ ,  $SD_{\rho} = .16$ ,  $k = 16$ , providing support for Hypothesis 6b (Hypotheses 5a, 5b, and 6a are not reported because there was an insufficient number of studies that assessed those relationships). In support of Hypothesis 7a, job demand risk factors were positively related to instigated incivility, with an overall effect size of  $\rho = .10$ ,  $SD_{\rho} = .15$ ,  $k = 20$ . Conversely, preventative job control had a negative relationship with instigated incivility, with an overall effect size of  $\rho = -.07$ ,  $SD_{\rho} = .13$ ,  $k = 8$ . However, the 95% confidence interval for this effect included zero. Hypothesis 7b was therefore not supported.

Table 2 summarizes the results of hypothesized reciprocal incivility processes. All forms of experienced incivility had a significant positive relationship with instigated incivility, with an overall effect size of  $\rho = .61$ ,  $SD_{\rho} = .13$ ,  $k = 39$ , providing support for Hypothesis 8. Additionally, all forms of observed incivility had a significant positive relationship with instigated incivility, with an overall effect size of  $\rho = .58$ ,  $SD_{\rho} = .15$ ,  $k = 6$ , providing support for Hypothesis 9.

## **Research Questions**

### ***Demographic Characteristics***

Research Question 1 focused on the impact of demographic characteristics on instigated incivility. After correcting for measurement unreliability, only three demographic characteristics were statistically significantly related to instigated incivility. First, age was negatively related to instigated incivility, with an overall effect size of  $\rho = -.08$ ,  $SD_{\rho} = .08$ ,  $k = 29$ , indicating that

younger participants in the included samples were more likely to instigate incivility than older participants. Second, biological sex<sup>3</sup> was statistically significantly related to instigated incivility, with an overall effect size of  $\rho = -.08$ ,  $SD_{\rho} = .04$ ,  $k = 29$ , such that male participants in the included samples were more likely to instigate incivility than female participants. Third, organizational level was positively related to instigated incivility, with an overall effect size of  $\rho = .10$ ,  $SD_{\rho} = .09$ ,  $k = 6$ , such that individuals whose roles were more senior in the organization were more likely to instigate incivility. The effects of the remaining demographic characteristics were not statistically significant.

### ***Reciprocal Incivility Moderators***

Research Question 2 was focused on identifying moderators in reciprocal incivility. The effect of experienced incivility on instigated incivility had significant between-study variance,  $\chi^2(38) = 508.93$ ,  $p < .001$ ,  $I^2 = 93$ , suggesting the presence of moderators. As such, we conducted exploratory analyses to identify the moderating role of any construct that was included in the relevant literature with sufficient frequency ( $k \geq 3$ ). In the literature that measured the relationship between experienced and instigated incivility, 15 theoretical constructs appeared with sufficient frequency for analysis: anger, cynicism, emotional exhaustion, hostile attribution bias, job control, job demands, job satisfaction, negative affect, organizational commitment, personal accomplishment, physical health, tenure, turnover intentions, work group civility, and workload. Additionally, the moderating role of three sample characteristics in the reciprocal incivility relationship was assessed in an exploratory fashion: average age of the sample, percent

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<sup>3</sup> Though scholars have argued for differentiating the constructs of biological sex (i.e., male and female) and gender (i.e., man, woman, transgender) for both social justice (Schellenberg & Kaiser, 2018) and methodological (Bittner & Goodyear-Grant, 2017) reasons, most studies included in this review either describe their sample in terms related to their biological sex or conflate biological sex and gender identity in their sample description. As such, we defer to language used in most of the included work and use biological sex to discuss differences due to biological sex and/or gender identity, assuming “male” participants self-identified as men and “female” participants self-identified as women.

of the sample identifying as non-male, and percent of the sample identifying as non-White. Additional moderation results can be found in [REDACTED FOR NAÏVE REVIEW].

Table 3 presents the results from mixed-effects meta-regression analyses using restricted maximum likelihood estimation to test these effects. Three of the 18 moderator tests yielded statistically significant results. First, the moderating effect of job control was statistically significant, such that the positive relationship between experienced and instigated incivility became more negative and thus weaker as job control increased,  $k = 4$ ,  $b = -0.50$ ,  $SE_b = 0.12$ ,  $p < .001$ ,  $R^2 = .90$ . Second, the moderating effect of work group civility was statistically significant, such that the positive relationship between experienced and instigated incivility became more negative and thus weaker as work group civility increased,  $k = 4$ ,  $b = -5.15$ ,  $SE_b = 1.94$ ,  $p = .008$ ,  $R^2 = .97$ . Third, the moderating effect of sample age was statistically significant, such that the positive relationship between experienced and instigated incivility became more negative and thus weaker as age increased,  $k = 29$ ,  $b = -0.01$ ,  $SE_b = 0.00$ ,  $p = .015$ ,  $R^2 = .15$ .

## **Methodological Moderators**

### ***Incivility Measurement Instrument***

Table 4 presents the results from subgroup moderator analyses to test the differential strength of relationships between instigated incivility and other constructs based on measurement instrument. Table 4 also presents independent samples  $t$ -test results to empirically evaluate the difference in  $\rho$  between subgroups. Results from  $t$ -tests indicate no significant differences due to measurement instrument, all  $ps > .090$ .

### ***Research Design***

We conducted moderator analyses on all hypothesized main effects to identify any differences in effects due to research design, comparing effects measured prospectively and

effects measured concurrently. Additionally, we conducted independent samples *t*-tests to assess the statistical significance of any differences. Results from these analyses are presented in Table 5 and show that most effects were not significantly different due to research design, all *ps* > .061. However, there was a statistically significant difference between prospective and concurrent effects for psychological well-being,  $t(21) = 2.48, p = .022$ . On average, effects that were measured concurrently,  $\rho = -.18, SD_{\rho} = .17, k = 20$ , were stronger and more negative than effects that were measured prospectively,  $\rho = .08, SD_{\rho} = .16, k = 3$ . There was also a statistically significant difference between prospective and concurrent effects for preventative job attitudes,  $t(25) = 2.66, p = .014$ . On average, effects that were measured concurrently,  $\rho = -.33, SD_{\rho} = .12, k = 24$ , were stronger than effects that were measured prospectively,  $\rho = -.14, SD_{\rho} = .07, k = 3$ .

### **Sensitivity Analyses**

We began assessment of publication bias and outliers by examining subgroup forest plots for each main effect and results from cumulative and leave-one-out meta-analyses. This examination warranted no immediate concern about neither outliers nor publication bias. Additionally, we tested the possible effect of publication bias empirically by assessing the moderating role of publication status in the hypothesized effects and evaluating the difference between published and unpublished effect size distributions using independent samples *t*-tests. Results from these analyses are presented in supplemental Appendix D. The results indicated no significant differences in estimates of  $\rho$  due to publication status, all *ps* > .269. Taken together, the results suggest that bias in the reported effects due to publication status is likely minimal.

### **Discussion**

Taken together, the results of this meta-analysis move the field toward a comprehensive understanding of incivility instigation.

### **Main Effects**

The results of this meta-analysis indicate that instigated incivility is related to a variety of individual- and situational-level constructs that can serve as either risk or preventative factors. In general, our meta-analytic results revealed that psychological ill-being and negative psychological states, certain personal dispositions (e.g., narcissism), certain demographic characteristics (i.e., younger age and male-identifying), negative job attitudes, greater job demands, and experiencing and observing incivility serve as risk factors that are related to greater likelihood of instigated incivility. Conversely, psychological well-being and positive psychological states, physical well-being, certain personal dispositions (e.g., agreeableness), positive job attitudes, and positive team characteristics serve as preventative factors that are related to less likelihood of instigated incivility.

There was one hypothesis that was not supported with the available data. Hypothesis 7b predicted that job control would serve as a preventative factor and be negatively related to incivility. Though the relationship was in the expected direction, the average effect size was not statistically significantly different from zero. However, this lack of support for Hypothesis 7b is qualified by the significant moderating effect of job control in the exploratory analyses, discussed in the section regarding reciprocal incivility moderators.

When examined as a whole, two important patterns emerged from these main effects. First, in this sample, the effects of experienced and observed incivility on incivility instigation were generally greater in magnitude than all other antecedent groups included in this meta-analysis. The relative importance of experienced and observed incivility over other correlates may provide direction for practice and future research. Specifically, researchers should examine the impact of experienced and observed incivility in addition to other individual- and situational-



level factors when conducting research on incivility instigation. This also has important implications for preventing incivility instigation through primary prevention; interventions may be more successful if they not only seek to maximize the preventative factors and minimize the other risk factors identified in this meta-analysis, but also educate employees on how to manage their responses to observing or experiencing uncivil behavior from others.

Second, in general, the effects of risk factors on incivility instigation were greater than their preventative factor counterparts; for example, psychological ill-being risk factors had a greater impact on increasing incivility instigation than psychological well-being preventative factors had on decreasing incivility instigation. This pattern is consistent with the general finding in psychological research that negative stimuli are typically more cognitively salient and impactful than positive stimuli (Baumeister et al., 2001; Cameron, 2008). This may provide direction for practitioners, such that primary interventions to halt incivility instigation by minimizing risk factors may be more successful than those that only maximize preventative factors. However, there was one exception to this pattern: positive job attitudes were more impactful at preventing instigated incivility than negative job attitudes were at increasing risk for instigated incivility, and the most impactful positive job attitudes were perceptions of justice and fairness. This finding suggests that interventions may be more successful if they include or are supplemented by efforts to increase justice and fairness perceptions. One particularly effective avenue for increasing justice perceptions within this context may be developing, implementing, and consistently upholding zero-tolerance policies for uncivil behavior and other forms of mistreatment.

### **Reciprocal Incivility Moderators**

Results from exploratory moderator analyses are qualified by the small number of samples available for meta-regression analyses, detailed further in our discussion of limitations. However, these results may still be informative. Though meta-analytic tests of main effects demonstrated no significant effect of job control on instigated incivility, job control emerged as a significant moderator of the reciprocal incivility relationship, such that employees were less likely to reciprocate incivility under conditions of greater job control. An explanation for this finding may be that individuals are better able to cope with uncivil behavior from others when they have greater job control, and these coping behaviors make uncivil behavior less likely. Employees who have greater job control have more freedom in deciding when and how their work tasks are completed, offering them the time and energy to seek social or organizational support, mentally and/or physically detach from work, reflect on the situation, or confront their uncivil colleague.

Work group civility was also a significant moderator of the relationship between experienced and instigated incivility, such that individuals were less likely to reciprocate uncivil behaviors from others when their work group engaged in more civil behavior. This finding is also consistent with the significant negative main effect of work group civility on incivility instigation. Together, these results are likely due to the influence of work group behavior on the formation of work group norms (Estes & Wang, 2008). For instance, if one's work group models civil behavior, other employees are likely to follow to conform to the group's norms (Cortina, 2008). Employees who experience incivility from individuals inside or outside of their work group will likely defer to the behaviors of other group members when deciding how to respond.

Age was also a significant moderator in the relationship between experienced and instigated incivility, suggesting that employees who are older may be less likely to reciprocate incivility than employees who are younger. This result is consistent with the demonstrated significant main effect of age on instigated incivility, which indicated that younger employees were more likely to instigate incivility in general. Past work has found that, compared to their younger counterparts, older employees are typically more successful at understanding and controlling their emotions (Moon et al., 2014; Ng & Feldman, 2009). Thus, older employees may cope with the emotional experience of incivility more successfully, reducing the likelihood that they will instigate in turn. Older employees may also be less likely to instigate incivility in general because uncivil employees may not have persisted in their occupations over time, either due to termination or turning over, or maintained employment in part due to their adoption of civil workplace behaviors.

### **Methodological Moderators**

There were no statistically significant differences in findings due to measurement instrument when comparing measures derived from Cortina et al.'s (2001) Workplace Incivility Scale and those from Martin and Hine's (2005) Uncivil Workplace Behavior Questionnaire. Though not statistically significant, the pattern of differences indicated that effects were stronger in magnitude when instigated incivility was measured with the WIS than with the UWBQ for six of the eight testable hypotheses. The multidimensional nature of the UWBQ and the included unidimensional effect sizes may have contributed to the generally smaller effect sizes from this measure.

The effect of concurrent versus prospective measurement of effects made some difference in the estimated effect sizes. Results indicated significant differences between

concurrent and prospective effects in two of the seven testable hypotheses: the effects of psychological well-being and preventative job attitudes on instigated incivility were stronger when measured concurrently than when measured prospectively. Though it is common for bivariate relationships to be stronger when measured concurrently than prospectively due to common method bias, this finding may also be due to the state-like nature of the constructs in question. Well-being, job attitudes, and job demands fluctuate over time and in response to a variety of individual and situational constructs, meaning their relationship to a behavior at a later point would likely be weaker than their relationship to the same behavior concurrently.

### **Contributions and Future Directions**

The results of this meta-analysis inform the literature on incivility in several ways. First, this study assembles and quantitatively synthesizes the existing literature on instigated incivility and explains the phenomenon within a novel organizing framework. This is an important step for the incivility literature given the lack of a comprehensive framework of incivility in workplace contexts and the relatively little attention paid to incivility instigation.

Second, this meta-analysis establishes the average effect sizes between instigated incivility and many of its correlates. Identifying the strength of these associations has important implications for future research on incivility in particular and mistreatment in general. Moreover, these results are valuable for organizational practitioners who aim to lower the incidence of incivility. Understanding the most impactful correlates of incivility may provide direction for the mechanisms by which organizations can limit the spread of uncivil behavior in their workforce.

Third, this work identified areas in which the existing literature on instigated incivility is insufficient, highlighting avenues for future work. The included literature measured very few team- and organizational-level constructs relative to individual-level constructs. The influence of

individual well-being, personal dispositions, and attitudes is undoubtedly important in predicting individual behavior. However, constructs at the team and organization level are likely also impactful, and may be more readily manipulated for the purposes of intervention than constructs at the individual employee level. As such, examining relationships between instigated incivility and correlates at levels other than the individual is necessary for understanding the contextual factors that influence incivility instigation and may provide a fruitful avenue for intervention development.

Fourth, this study examined potential moderators in the relationship between experienced and instigated incivility, aiming to identify important factors in the reciprocal incivility cycle. Though the availability of data limited the ability to empirically test many of these moderators, older age, increased job control, and more work group civility emerged as constructs that prevent the perpetuation of further incivility. Further identification of mediators and moderators in the relationship between experienced and instigated incivility is crucial to the field's understanding of the context in which the social process of incivility unfolds. Additionally, results from these analyses may provide avenues for intervention in the reciprocal incivility cycle. More work is needed to empirically confirm these results and test potential moderating variables that were not analyzed in this study, but these results provide an important starting point for this work.

Fourth, although the focus of our work is on the correlates of instigated incivility, our results have implications when compared to the correlates of experienced or observed incivility. For example, recent meta-analytic work demonstrated that organizational tenure was significantly and negatively related to experienced incivility, such that newer employees were more likely to be targeted by incivility (Yao et al., 2021). Conversely, the present work demonstrated that organizational tenure was unrelated to instigated incivility. This difference

could indicate that whereas the likelihood of experiencing incivility may depend on one's relative power in the organization, the likelihood of instigating incivility may not. Comparing the effect sizes of certain constructs across different forms of incivility may yield valuable insights for research and practice, and future scholars should explore these differences in depth.

Finally, this work has implications for interventions that aim to prevent incivility instigation and reciprocation. First, the strong effects of experienced and observed incivility on instigating incivility provide support for the presence of reciprocal incivility. It is likely, then, that intervention methods will be more successful if they not only aim to prevent incivility in the first place, but also teach effective coping mechanisms for those who have been targets or observers to prevent their future instigation. Second, the trend of differences in the effects of risk and preventative factors on incivility instigation suggests that interventions that aim to maximize preventative factors alone may not be as successful as those that aim to only minimize risk factors or do both concurrently. Third and finally, the moderating effects of job control and work group civility on the relationship between experienced and instigated incivility indicate that these preventative factors may be successful in reducing reciprocal incivility through utilizing job crafting techniques or improving team interpersonal behavior.

### **Limitations**

There are some limitations to this work, the most important of which is the number of studies that were eligible for inclusion. Many of the results reported in this meta-analysis were computed using effects from few samples, limiting our ability to identify statistically significant effects and generalize the results beyond the included literature. Our decision to use random-effects rather than fixed-effects models with these relatively small numbers of samples may have introduced statistical bias, such that effects are slightly underestimated and their variability

slightly overestimated (Field, 2001; Hunter & Schmidt, 2008). Though it may be that the effects estimated in this work are more conservative estimates of true population effects, results should be interpreted with caution.

The small number of studies was especially impactful for tests of theoretical moderators; in many of the reported meta-regression models, the number of included samples fell short of the suggested minimum of ten samples for each covariate (Borenstein et al., 2009). This is particularly noteworthy in the context of Andersson and Pearson's (1999) formative paper that outlines several proposed moderators of the relationship between experienced and instigated incivility that were untestable with the available data. This issue should be addressed by additional primary studies on instigated incivility, especially those that include organizational-level correlates and other forms of incivility (i.e., observed and experienced). Although the availability of data was a limiting factor for this study, we were able to assess the relationships between instigated incivility and a wide range of correlates, establishing a foundation upon which future work can build.

As with any meta-analysis, there is the possibility for these results to be stronger estimates than actual population effects due to the "file drawer" problem, or the unintentional exclusion of unpublished works that tend to report weaker effects than published works. However, there are reasons to be confident in our results. We made multiple concerted attempts to identify, obtain, and include unpublished work. As a result, over one-third (36%) of the included samples were from unpublished sources, including theses and dissertations, draft manuscripts, and conference presentations. Additionally, empirical and graphical sensitivity analyses did not indicate the presence of publication bias. Average effects calculated from published and unpublished works were not significantly different from one another and were

similar in direction and magnitude (see supplemental Appendix D). Thus, though the “file drawer” problem limits the ability to generalize results from every meta-analysis, the proportion of unpublished work in the included literature and results from empirical and graphical sensitivity analyses suggest that this issue may not be as impactful for the present study relative to other meta-analyses.

Another important limitation in most meta-analyses is the ability to make causal inferences from the average effects generated in this study. Indeed, the temporal relationships between instigated incivility and the included variables cannot be inferred with confidence. A concerted effort is needed to measure these relationships with prospective studies that employ appropriate statistical controls. Such studies would more adequately capture the social process of incivility. Finally, given the large number of studies and the variability of research designs, we presented our results primarily in terms of aggregated constructs for simplicity. However, this obscures some potentially meaningful differential effects within aggregated constructs, such as the finding that the individual characteristics of Machiavellianism and psychopathy were more influential than others. Although a discussion of these individual differences is beyond the scope of this paper, we hope to inspire future research to more comprehensively examine nuances such as these.

### **Conclusion**

The present study has reviewed and synthesized the body of literature related to instigated incivility in the workplace and provided a comprehensive organizing framework through which researchers can conceptualize the antecedents and correlates of instigated incivility. Additionally, through meta-analysis, this work has provided estimates of the strength between instigated incivility and its correlates, offered evidence for the existence of reciprocal



incivility, and has empirically tested theoretical moderators in the relationship between experienced and instigated incivility. This study informs current literature and provides avenues for future work to extend the field's understanding of incivility instigation. Furthermore, this work also suggests numerous mechanisms by which practitioners can reduce incivility in organizations, both as isolated incidents and in response to experiencing incivility from others. In sum, incivility may beget further incivility, but we hope this work provides critical information to better understand and prevent these cycles from occurring.

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**Table 1**

*Meta-Analytic Results for the Relationships Between Instigated Incivility and Other Constructs*

| Variable                                     | <i>k</i>  | <i>N</i>     | <i>r</i>    | $\rho$      | <i>SD</i> $\rho$ | 80% CR      |             | 95% CI      |             | <i>Q</i>         | <i>I</i> <sup>2</sup> |
|--|-----------|--------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|------------------|-----------------------|
|  |           |              |             |             |                  | LL          | UL          | LL          | UL          |                  |                       |
| <b>Psychological ill-being risk factors</b>  | <b>36</b> | <b>15989</b> | <b>.31</b>  | <b>.36</b>  | <b>.15</b>       | <b>.18</b>  | <b>.56</b>  | <b>.31</b>  | <b>.42</b>  | <b>341.42***</b> | <b>90</b>             |
| Burnout (general)                            | 3         | 674          | .42         | .46         | .00              | .47         | .47         | .35         | .58         | 1.85             | 0                     |
| Diminished personal acc.                     | 5         | 4342         | .15         | .19         | .07              | .08         | .30         | .09         | .29         | 15.71**          | 75                    |
| Depersonalization                            | 9         | 6956         | .35         | .42         | .09              | .29         | .54         | .34         | .49         | 53.44***         | 85                    |
| Emotional exhaustion                         | 16        | 9360         | .26         | .29         | .15              | .09         | .50         | .21         | .38         | 197.23***        | 92                    |
| Job stress                                   | 6         | 3498         | .25         | .30         | .03              | .25         | .34         | .24         | .36         | 7.45             | 33                    |
| Negative affect (state)                      | 6         | 1133         | .43         | .50         | .03              | .24         | .76         | .30         | .70         | 38.83***         | 87                    |
| <b>Preventative psychological well-being</b> | <b>21</b> | <b>10214</b> | <b>-.15</b> | <b>-.17</b> | <b>.18</b>       | <b>-.40</b> | <b>.06</b>  | <b>-.25</b> | <b>-.09</b> | <b>246.62***</b> | <b>92</b>             |
| Job-related affective well-being             | 3         | 497          | -.30        | -.37        | .00              | -.37        | -.37        | -.54        | -.20        | 1.19             | 0                     |
| Mental health (general)                      | 3         | 1752         | -.14        | -.14        | .35              | -.80        | .51         | -1.01       | .73         | 105.43***        | 98                    |
| State positive affect                        | 4         | 801          | -.09        | -.09        | .07              | -.21        | .03         | -.26        | .07         | 5.19             | 61                    |
| Psychological capital                        | 5         | 1260         | -.17        | -.19        | .09              | -.32        | -.05        | -.33        | -.05        | 10.98*           | 64                    |
| Well-being (general)                         | 3         | 5624         | -.12        | -.15        | .18              | -.49        | .20         | -.61        | .31         | 90.49***         | 98                    |
| <b>Preventative physical well-being</b>      | <b>5</b>  | <b>2945</b>  | <b>-.19</b> | <b>-.25</b> | <b>.09</b>       | <b>-.39</b> | <b>-.10</b> | <b>-.38</b> | <b>-.11</b> | <b>17.10**</b>   | <b>77</b>             |
| <b>Personal disposition risk factors</b>     | <b>19</b> | <b>6329</b>  | <b>.39</b>  | <b>.47</b>  | <b>.24</b>       | <b>.15</b>  | <b>.78</b>  | <b>.35</b>  | <b>.58</b>  | <b>371.23***</b> | <b>95</b>             |
| Anger (trait)                                | 8         | 3116         | .35         | .40         | .08              | .29         | .50         | .32         | .47         | 22.86**          | 69                    |
| Entitlement                                  | 3         | 681          | .29         | .37         | .42              | -.43        | 1.16        | -.70        | 1.43        | 64.49***         | 97                    |
| Machiavellianism                             | 3         | 1064         | .61         | .70         | .31              | .12         | 1.29        | -.07        | 1.48        | 135.87***        | 99                    |
| Narcissism                                   | 8         | 2680         | .34         | .38         | .26              | .01         | .75         | .16         | .60         | 166.93***        | 96                    |
| Negative affect (trait)                      | 6         | 2477         | .42         | .47         | .14              | .27         | .67         | .32         | .62         | 49.75***         | 90                    |
| Neuroticism                                  | 7         | 2882         | .23         | .28         | .16              | .05         | .51         | .12         | .44         | 51.37***         | 88                    |
| Psychopathy                                  | 3         | 1064         | .59         | .68         | .21              | .28         | 1.08        | .14         | 1.22        | 60.14***         | 97                    |

| Variable                                  | <i>k</i>  | <i>N</i>     | <i>r</i>    | $\rho$      | <i>SD<math>\rho</math></i> | 80% CR      |             | 95% CI      |             | <i>Q</i>         | <i>I<sup>2</sup></i> |
|---|-----------|--------------|-------------|-------------|----------------------------|-------------|-------------|-------------|-------------|------------------|----------------------|
|   |           |              |             |             |                            | LL          | UL          | LL          | UL          |                  |                      |
| <b>Preventative personal dispositions</b> | <b>13</b> | <b>44778</b> | <b>-.26</b> | <b>-.34</b> | <b>.18</b>                 | <b>-.59</b> | <b>-.09</b> | <b>-.45</b> | <b>-.22</b> | <b>111.28***</b> | <b>89</b>            |
| Agreeableness                             | 8         | 3202         | -.23        | -.31        | .19                        | -.58        | -.05        | -.48        | -.15        | 67.66***         | 90                   |
| Conscientiousness                         | 8         | 3556         | -.21        | -.26        | .20                        | -.55        | .02         | -.44        | -.09        | 96.07***         | 93                   |
| Emotional intelligence                    | 4         | 791          | -.31        | -.36        | .19                        | -.67        | -.04        | -.68        | -.03        | 24.00***         | 87                   |
| Positive affect (trait)                   | 3         | 944          | .02         | .03         | .14                        | -.24        | .29         | -.36        | .41         | 13.18**          | 85                   |
| Social desirability                       | 4         | 814          | -.08        | -.09        | .16                        | -.35        | .17         | -.38        | .19         | 13.63**          | 78                   |
| <b>Job attitude risk factors</b>          | <b>16</b> | <b>10524</b> | <b>.24</b>  | <b>.28</b>  | <b>.09</b>                 | <b>.16</b>  | <b>.40</b>  | <b>.23</b>  | <b>.34</b>  | <b>80.06***</b>  | <b>81</b>            |
| Job insecurity                            | 3         | 1316         | .19         | .23         | .00                        | .23         | .23         | .10         | .36         | 1.74             | 0                    |
| Psych. contract violation                 | 3         | 2078         | .36         | .40         | .05                        | .30         | .50         | .24         | .56         | 6.01*            | 67                   |
| Turnover intentions                       | 8         | 5798         | .19         | .23         | .04                        | .17         | .29         | .18         | .28         | 13.10            | 47                   |
| Work/nonwork conflict                     | 3         | 1974         | .28         | .31         | .13                        | .07         | .55         | -.02        | .64         | 21.06***         | 91                   |
| <b>Preventative job attitudes</b>         | <b>24</b> | <b>15615</b> | <b>-.27</b> | <b>-.33</b> | <b>.12</b>                 | <b>-.48</b> | <b>-.18</b> | <b>-.38</b> | <b>-.28</b> | <b>176.58***</b> | <b>87</b>            |
| Fairness perceptions                      | 3         | 1773         | -.29        | -.35        | .00                        | -.35        | -.35        | -.38        | -.32        | 0.16             | 0                    |
| Job involvement                           | 3         | 1116         | .02         | .03         | .19                        | -.33        | .39         | -.47        | .52         | 19.38***         | 90                   |
| Job satisfaction                          | 18        | 10976        | -.26        | -.32        | .15                        | -.51        | -.13        | -.39        | -.24        | 179.36***        | 91                   |
| Distributive justice perceptions          | 4         | 1077         | -.12        | -.13        | .13                        | -.35        | .09         | -.37        | .11         | 15.23**          | 80                   |
| Interactional justice perceptions         | 3         | 1779         | -.30        | -.33        | .04                        | -.40        | -.26        | -.47        | -.19        | 3.55             | 44                   |
| Procedural justice perceptions            | 6         | 2452         | -.18        | -.20        | .21                        | -.50        | .11         | -.42        | .03         | 78.97***         | 94                   |
| Organizational commitment                 | 4         | 2867         | -.22        | -.35        | .00                        | -.35        | -.35        | -.44        | -.27        | 2.69             | 0                    |
| Affective org. commitment                 | 3         | 1404         | -.16        | -.19        | .00                        | -.19        | -.19        | -.27        | -.10        | 0.70             | 0                    |
| Respect perceived from others             | 4         | 3005         | -.19        | -.24        | .15                        | -.49        | .01         | -.49        | .01         | 34.82***         | 91                   |
| <b>Preventative team factors</b>          | <b>16</b> | <b>11188</b> | <b>-.24</b> | <b>-.28</b> | <b>.16</b>                 | <b>-.50</b> | <b>-.06</b> | <b>-.37</b> | <b>-.19</b> | <b>234.58***</b> | <b>94</b>            |
| Coworker support                          | 4         | 3880         | -.17        | -.21        | .03                        | -.26        | -.17        | -.29        | -.14        | 4.47             | 33                   |

| Variable                        | <i>k</i>  | <i>N</i>     | <i>r</i>    | $\rho$      | <i>SD<math>\rho</math></i> | 80% CR      |            | 95% CI      |            | <i>Q</i>         | <i>I<sup>2</sup></i> |
|---------------------------------|-----------|--------------|-------------|-------------|----------------------------|-------------|------------|-------------|------------|------------------|----------------------|
|                                 |           |              |             |             |                            | LL          | UL         | LL          | UL         |                  |                      |
| Leader-member exchange          | 4         | 1181         | -.07        | -.08        | .14                        | -.30        | .15        | -.32        | .17        | 17.06***         | 82                   |
| Supervisor support              | 3         | 3480         | -.19        | -.22        | .00                        | -.22        | -.22       | -.27        | -.17       | 0.69             | 0                    |
| Trust in management             | 3         | 3867         | -.23        | -.29        | .00                        | -.29        | -.29       | -.34        | -.23       | 0.88             | 0                    |
| Work group civility             | 7         | 5904         | -.33        | -.38        | .11                        | -.53        | -.23       | -.48        | -.28       | 56.22***         | 89                   |
| <b>Job demand risk factors</b>  | <b>20</b> | <b>13054</b> | <b>.08</b>  | <b>.10</b>  | <b>.15</b>                 | <b>-.10</b> | <b>.30</b> | <b>.02</b>  | <b>.17</b> | <b>216.73***</b> | <b>91</b>            |
| Job demands (general)           | 9         | 6071         | .04         | .05         | .20                        | -.23        | .33        | -.11        | .21        | 157.78***        | 95                   |
| Work hours                      | 6         | 2552         | .08         | .08         | .09                        | -.06        | .21        | -.03        | .19        | 18.74**          | 73                   |
| Workload                        | 5         | 4587         | .14         | .17         | .07                        | .06         | .27        | .07         | .26        | 16.33**          | 75                   |
| <b>Preventative job control</b> | <b>8</b>  | <b>7571</b>  | <b>-.06</b> | <b>-.07</b> | <b>.13</b>                 | <b>-.26</b> | <b>.12</b> | <b>-.19</b> | <b>.04</b> | <b>80.83***</b>  | <b>91</b>            |
| <b>Demographics</b>             |           |              |             |             |                            |             |            |             |            |                  |                      |
| Age                             | 29        | 13127        | -.07        | -.08        | .08                        | -.18        | .03        | -.11        | -.04       | 94.34***         | 70                   |
| Education                       | 10        | 3175         | .00         | .00         | .08                        | -.11        | .11        | -.07        | .07        | 24.99**          | 64                   |
| Biological sex <sup>a</sup>     | 29        | 12700        | -.07        | -.08        | .04                        | -.13        | -.03       | -.10        | -.05       | 443.44*          | 36                   |
| Job tenure                      | 10        | 5584         | -.02        | -.02        | .01                        | -.04        | -.00       | -.05        | .01        | 9.79             | 8                    |
| Organizational level            | 6         | 4757         | .10         | .10         | .09                        | -.02        | .23        | .00         | .20        | 30.81***         | 84                   |
| Organizational tenure           | 9         | 2854         | .01         | .01         | .07                        | -.09        | .11        | -.06        | .08        | 18.62*           | 57                   |
| Race <sup>b</sup>               | 5         | 2486         | -.02        | -.03        | .07                        | -.14        | .09        | -.14        | .08        | 13.47*           | 70                   |
| Work experience                 | 5         | 1387         | -.01        | -.01        | .07                        | -.12        | .10        | -.13        | .11        | 8.76             | 54                   |

*Note.* Though the variability of rho may be biased when sample sizes are small, this approach is believed to produce more accurate estimates of the random-effects variance component than tau-squared (Brannick et al., 2011; Kepes et al., 2013; Marín-Martínez & Sánchez-Meca, 2010).

<sup>a</sup> 0 = male, 1 = female

<sup>b</sup> 0 = White, 1 = non-White

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



**Table 2**

*Meta-Analytic Results for Tests of Reciprocal Incivility*

| Variable                                   | <i>k</i>  | <i>N</i>     | <i>r</i>   | $\rho$     | <i>SD</i> $\rho$ | 80% CR     |            | 95% CI     |            | <i>Q</i>         | <i>I</i> <sup>2</sup> |
|--|-----------|--------------|------------|------------|------------------|------------|------------|------------|------------|------------------|-----------------------|
|  |           |              |            |            |                  | LL         | UL         | LL         | UL         |                  |                       |
| <b>Experienced incivility risk factors</b> | <b>39</b> | <b>21763</b> | <b>.53</b> | <b>.61</b> | <b>.13</b>       | <b>.45</b> | <b>.78</b> | <b>.57</b> | <b>.66</b> | <b>508.93***</b> | <b>93</b>             |
| Experienced (general)                      | 15        | 4212         | .51        | .56        | .18              | .32        | .81        | .46        | .67        | 201.72***        | 93                    |
| Exp. from coworker                         | 18        | 15114        | .53        | .62        | .10              | .48        | .75        | .57        | .67        | 220.02***        | 92                    |
| Exp. from customer                         | 4         | 1411         | .48        | .55        | .03              | .50        | .61        | .46        | .64        | 4.63             | 35                    |
| Exp. from supervisor                       | 13        | 14023        | .38        | .45        | .08              | .34        | .56        | .40        | .50        | 94.82***         | 87                    |
| <b>Observed incivility risk factors</b>    | <b>6</b>  | <b>8386</b>  | <b>.50</b> | <b>.58</b> | <b>.15</b>       | <b>.36</b> | <b>.79</b> | <b>.42</b> | <b>.73</b> | <b>203.97***</b> | <b>98</b>             |
| Obs. from coworker                         | 4         | 7756         | .50        | .57        | .10              | .41        | .74        | .41        | .74        | 84.87***         | 96                    |
| Obs. from supervisor                       | 4         | 7756         | .41        | .47        | .09              | .32        | .62        | .32        | .62        | 54.55***         | 95                    |

\*\*\**p* < .001.

**Table 3**

*Exploratory Tests of Continuous Moderators in the Relationship Between Experienced and Instigated Incivility*

| Moderator                     | <i>k</i> | <i>b</i> | <i>SE<sub>b</sub></i> | <i>p</i> | 95% CI |       | <i>R</i> <sup>2</sup> |
|-------------------------------|----------|----------|-----------------------|----------|--------|-------|-----------------------|
|                               |          |          |                       |          | LL     | UL    |                       |
| <b>Theoretical constructs</b> |          |          |                       |          |        |       |                       |
| Anger                         | 3        | -2.08    | 1.38                  | .133     | -4.79  | 0.63  | .44                   |
| Cynicism                      | 6        | -0.90    | 0.74                  | .222     | -2.35  | 0.55  | .07                   |
| Emotional exhaustion          | 12       | -0.61    | 0.52                  | .237     | -1.64  | 0.41  | .01                   |
| Hostile attribution bias      | 3        | 0.57     | 1.44                  | .692     | -2.25  | 3.39  | .00                   |
| Job control                   | 4        | -0.50    | 0.12                  | <.001    | -0.75  | -0.26 | .90                   |
| Job demands                   | 4        | 0.13     | 0.11                  | .208     | -0.07  | 0.34  | .44                   |
| Job satisfaction              | 6        | 0.42     | 0.48                  | .381     | -0.52  | 1.37  | .00                   |
| Negative affect               | 7        | -0.35    | 0.35                  | .324     | -1.04  | 0.34  | .05                   |
| Organizational commitment     | 4        | -0.17    | 0.26                  | .512     | -0.68  | 0.34  | .00                   |
| Personal accomplishment       | 5        | -1.62    | 1.42                  | .258     | -4.38  | 1.17  | .06                   |
| Physical health               | 4        | -0.26    | 0.19                  | .160     | -0.63  | 0.10  | 1.00                  |
| Tenure                        | 3        | -0.14    | 0.34                  | .675     | -0.81  | 0.52  | .00                   |
| Turnover intentions           | 4        | -0.04    | 0.96                  | .970     | -1.93  | 1.85  | .00                   |
| Work group civility           | 4        | -5.15    | 1.94                  | .008     | -8.96  | -1.36 | .97                   |
| Workload                      | 5        | 0.46     | 0.76                  | .546     | -1.04  | 1.96  | .00                   |
| <b>Sample characteristics</b> |          |          |                       |          |        |       |                       |
| Average age                   | 29       | -0.01    | 0.00                  | .015     | -0.02  | -0.00 | .15                   |
| Percent non-male              | 34       | 0.00     | 0.00                  | .344     | -0.00  | 0.00  | .00                   |
| Percent non-White             | 17       | -0.00    | 0.00                  | .568     | -0.01  | 0.00  | .00                   |

**Table 4**

*Moderating Role of Measurement Instrument on Hypothesized Main Effects*

| Measure                                      | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$ | <i>SD<math>\rho</math></i> | 80% CR |      | 95% CI |      | <i>Q</i>  | <i>I<sup>2</sup></i> | <i>t (df)</i>    |
|--|----------|----------|----------|--------|----------------------------|--------|------|--------|------|-----------|----------------------|------------------|
|  |          |          |          |        |                            | LL     | UL   | LL     | UL   |           |                      |                  |
| <b>Psychological ill-being risk factors</b>  |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.19 (25)</b> |
| Total  | 36       | 15989    | .31      | .36    | .15                        | .18    | .56  | .31    | .42  | 341.42*** | 90                   |                  |
| WIS  | 18       | 9049     | .30      | .36    | .16                        | .14    | .58  | .28    | .44  | 211.85*** | 92                   |                  |
| UWBQ   | 9        | 3020     | .30      | .35    | .17                        | .11    | .59  | .21    | .49  | 84.88***  | 91                   |                  |
| <b>Preventative psychological well-being</b> |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.25 (18)</b> |
| Total  | 21       | 10214    | -.15     | -.17   | .18                        | -.40   | .06  | -.25   | -.09 | 246.62*** | 92                   |                  |
| WIS  | 13       | 8503     | -.14     | -.17   | .19                        | -.43   | .09  | -.29   | -.05 | 225.23*** | 95                   |                  |
| UWBQ   | 7        | 1580     | -.14     | -.15   | .10                        | -.29   | -.01 | -.26   | -.04 | 17.53**   | 66                   |                  |
| <b>Personal disposition risk factors</b>     |          |          |          |        |                            |        |      |        |      |           |                      | <b>1.49 (14)</b> |
| Total  | 19       | 6329     | .39      | .47    | .24                        | .15    | .78  | .35    | .58  | 371.23*** | 95                   |                  |
| WIS  | 11       | 2896     | .49      | .59    | .26                        | .24    | .94  | .41    | .76  | 224.62*** | 96                   |                  |
| UWBQ   | 5        | 2802     | .36      | .41    | .11                        | .23    | .58  | .26    | .56  | 33.21***  | 88                   |                  |
| <b>Preventative personal dispositions</b>    |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.40 (9)</b>  |
| Total  | 13       | 44778    | -.26     | -.34   | .18                        | -.59   | -.09 | -.45   | -.22 | 111.28*** | 89                   |                  |
| WIS  | 6        | 1613     | -.27     | -.39   | .29                        | -.81   | .04  | -.70   | -.08 | 78.06***  | 94                   |                  |
| UWBQ   | 5        | 2491     | -.27     | -.33   | .13                        | -.52   | -.14 | -.50   | -.16 | 28.68***  | 86                   |                  |
| <b>Job attitude risk factors</b>             |          |          |          |        |                            |        |      |        |      |           |                      | <b>1.67 (12)</b> |
| Total  | 16       | 10524    | .24      | .28    | .09                        | .16    | .40  | .23    | .34  | 80.06***  | 81                   |                  |
| WIS  | 10       | 7102     | .21      | .25    | .06                        | .16    | .34  | .19    | .30  | 28.46***  | 68                   |                  |
| UWBQ   | 4        | 2566     | .29      | .32    | .10                        | .15    | .49  | .15    | .50  | 23.55***  | 87                   |                  |
| <b>Preventative job attitudes</b>            |          |          |          |        |                            |        |      |        |      |           |                      | <b>1.79 (19)</b> |
| Total  | 24       | 15615    | -.27     | -.33   | .12                        | -.48   | -.18 | -.38   | -.28 | 176.58*** | 87                   |                  |
| WIS  | 18       | 12216    | -.26     | -.33   | .11                        | -.47   | -.18 | -.39   | -.27 | 117.62*** | 86                   |                  |
| UWBQ   | 3        | 919      | -.19     | -.21   | .00                        | -.21   | -.21 | -.34   | -.08 | 1.45      | 0                    |                  |
| <b>Job demand risk factors</b>               |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.99 (13)</b> |
| Total  | 20       | 13054    | .08      | .10    | .15                        | -.10   | .30  | .02    | .17  | 216.73*** | 91                   |                  |

| Measure                                    | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$ | <i>SD<math>\rho</math></i> | 80% CR |     | 95% CI |     | <i>Q</i>  | <i>I</i> <sup>2</sup> | <i>t</i> ( <i>df</i> ) |
|--|----------|----------|----------|--------|----------------------------|--------|-----|--------|-----|-----------|-----------------------|------------------------|
|  |          |          |          |        |                            | LL     | UL  | LL     | UL  |           |                       |                        |
| WIS  | 11       | 7859     | .05      | .06    | .19                        | -.20   | .32 | -.07   | .19 | 184.29*** | 95                    |                        |
| UWBQ                                       | 4        | 2192     | .13      | .16    | .09                        | .01    | .30 | -.01   | .32 | 12.87**   | 77                    |                        |
| <b>Experienced incivility risk factors</b> |          |          |          |        |                            |        |     |        |     |           | <b>1.64 (27)</b>      |                        |
| Total                                      | 39       | 21763    | .53      | .61    | .13                        | .45    | .78 | .57    | .66 | 508.93*** | 93                    |                        |
| WIS  | 25       | 15761    | .54      | .63    | .11                        | .48    | .77 | .58    | .67 | 291.98*** | 92                    |                        |
| UWBQ                                       | 4        | 2167     | .48      | .52    | .15                        | .29    | .76 | .29    | .76 | 50.01***  | 94                    |                        |

*Note.* WIS = Workplace Incivility Scale (Cortina et al., 2001) and its derivations; UWBQ = Uncivil Workplace Behavior Questionnaire (Martin & Hine, 2005) and its derivations.

\*\**p* < .01. \*\*\**p* < .001.

**Table 5**

*Moderating Role of Research Design on Hypothesized Main Effects*

| Design                                       | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$ | <i>SD<math>\rho</math></i> | 80% CR |      | 95% CI |      | <i>Q</i>  | <i>I<sup>2</sup></i> | <i>t (df)</i>       |
|--|----------|----------|----------|--------|----------------------------|--------|------|--------|------|-----------|----------------------|---------------------|
|  |          |          |          |        |                            | LL     | UL   | LL     | UL   |           |                      |                     |
| <b>Psychological ill-being risk factors</b>  |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.11 (35)</b>    |
| Total  | 36       | 15989    | .31      | .37    | .15                        | .17    | .56  | .31    | .42  | 341.03*** | 90                   |                     |
| Concurrent                                   | 34       | 15637    | .31      | .36    | .15                        | .17    | .56  | .31    | .42  | 336.88*** | 90                   |                     |
| Prospective                                  | 3        | 514      | .32      | .38    | .10                        | .19    | .57  | .06    | .69  | 5.10      | 61                   |                     |
| <b>Preventative psychological well-being</b> |          |          |          |        |                            |        |      |        |      |           |                      | <b>2.48* (21)</b>   |
| Total  | 21       | 10214    | -.15     | -.17   | .18                        | -.40   | .06  | -.25   | -.09 | 246.62*** | 92                   |                     |
| Concurrent                                   | 20       | 9988     | -.16     | -.18   | .17                        | -.40   | .04  | -.26   | -.10 | 220.70*** | 91                   |                     |
| Prospective                                  | 3        | 517      | .07      | .08    | .16                        | -.22   | .38  | -.37   | .53  | 9.03*     | 78                   |                     |
| <b>Personal disposition risk factors</b>     |          |          |          |        |                            |        |      |        |      |           |                      | <b>2.00 (17)</b>    |
| Total  | 19       | 6329     | .39      | .47    | .24                        | .15    | .78  | .35    | .58  | 371.23*** | 95                   |                     |
| Concurrent                                   | 12       | 3927     | .33      | .38    | .11                        | .24    | .53  | .31    | .46  | 49.53***  | 78                   |                     |
| Prospective                                  | 7        | 2402     | .50      | .59    | .34                        | .11    | 1.08 | .28    | .91  | 314.42*** | 98                   |                     |
| <b>Preventative personal dispositions</b>    |          |          |          |        |                            |        |      |        |      |           |                      | <b>1.68 (11)</b>    |
| Total  | 13       | 44778    | -.26     | -.34   | .18                        | -.59   | -.09 | -.4    | -.22 | 111.28*** | 89                   |                     |
| Concurrent                                   | 10       | 3682     | -.22     | -.30   | .12                        | -.46   | -.14 | -.39   | -.20 | 40.15***  | 78                   |                     |
| Prospective                                  | 3        | 796      | -.40     | -.50   | .34                        | -1.15  | .14  | -1.36  | .35  | 60.48     | 97                   |                     |
| <b>Preventative job attitudes</b>            |          |          |          |        |                            |        |      |        |      |           |                      | <b>2.66* (25)</b>   |
| Total  | 24       | 15615    | -.27     | -.33   | .12                        | -.48   | -.18 | -.38   | -.28 | 177.38*** | 81                   |                     |
| Concurrent                                   | 24       | 15615    | -.27     | -.33   | .12                        | -.17   | -.50 | -.39   | -.28 | 200.52*** | 90                   |                     |
| Prospective                                  | 3        | 1825     | -.11     | -.14   | .07                        | -.28   | -.00 | -.36   | .08  | 6.14*     | 74                   |                     |
| <b>Job demand risk factors</b>               |          |          |          |        |                            |        |      |        |      |           |                      | <b>0.84*** (18)</b> |
| Total  | 20       | 13054    | .08      | .10    | .15                        | -.10   | .30  | .02    | .17  | 216.73*** | 91                   |                     |
| Concurrent                                   | 16       | 11875    | .08      | .10    | .16                        | -.11   | .32  | .02    | .19  | 205.77*** | 93                   |                     |
| Prospective                                  | 4        | 1179     | .03      | .03    | .07                        | -.09   | .15  | -.13   | .19  | 6.61      | 55                   |                     |
| <b>Experienced incivility risk factors</b>   |          |          |          |        |                            |        |      |        |      |           |                      | <b>1.09 (41)</b>    |
| Total  | 39       | 21763    | .53      | .61    | .11                        | .45    | .78  | .57    | .66  | 508.93*** | 93                   |                     |

| Design      | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$ | $SD_{\rho}$ | 80% CR |     | 95% CI |     | <i>Q</i>  | <i>I</i> <sup>2</sup> | <i>t</i> ( <i>df</i> ) |
|-------------|----------|----------|----------|--------|-------------|--------|-----|--------|-----|-----------|-----------------------|------------------------|
|             |          |          |          |        |             | LL     | UL  | LL     | UL  |           |                       |                        |
| Concurrent  | 37       | 21137    | .53      | .61    | .12         | .44    | .77 | .56    | .65 | 490.11*** | 93                    |                        |
| Prospective | 6        | 1835     | .61      | .67    | .16         | .44    | .90 | .50    | .84 | 85.99***  | 95                    |                        |

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