

Effect of Workplace Incivility on End-of-Work Negative Affect: Examining Individual and Organizational Moderators in a Daily Diary Study

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Although previous studies have linked workplace incivility with various negative outcomes, they mainly focused on the long-term effects of chronic exposure to workplace incivility, whereas targets' short-term reactions to incivility episodes have been largely neglected. Using a daily diary design, the current study examined effects of daily workplace incivility on end-of-work negative affect and explored potential individual and organizational moderators. Data collected from 76 full-time employees across 10 consecutive working days revealed that daily workplace incivility positively predicted end-of-work negative affect while controlling for before-work negative affect. Further, the relationship was stronger for people with low emotional stability, high hostile attribution bias, external locus of control, and people experiencing low chronic workload and more chronic organizational constraints, as compared with people with high emotional stability, low hostile attribution bias, internal locus of control, and people experiencing high chronic workload and fewer chronic organizational constraints, respectively.

Keywords: diary study, negative affect, personality, stressor, workplace incivility

Workplace incivility is defined as “low intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect” (Andersson & Pearson, 1999, p. 457). Workplace incivility happens quite often at work; in a nationwide survey, 10% of respondents reported to have witnessed workplace incivility on a daily basis (Pearson, Andersson, & Porath, 2005), and 98% of all workers that were sampled by Porath, Pearson, and colleagues had experienced workplace incivility at work (Porath & Pearson, 2013). Because of its high prevalence, workplace incivility has drawn many researchers' attention and a number of studies have uncovered its impact on targets. For example, workplace incivility was found to be associated with reduced satisfaction with the job, supervisor, and coworkers (Cortina, Magley, Williams, & Langhout, 2001; Lim & Lee, 2011), lower intention to stay (Griffin, 2010), and decreased

mental and physical health (Lim, Cortina, & Magley, 2008). In the current study, we examined targets' short-term emotional reactions to workplace incivility experience with a daily diary design. In addition, moderating effects of three personality traits (emotional stability, hostile attribution bias, and locus of control) and two situational factors (workload and organizational constraints) were examined.

Despite the previous findings on outcomes of workplace incivility, there are still several gaps in the current literature on workplace incivility that the current study aimed to remedy. On the one hand, although workplace incivility has been considered as an important workplace stressor (Penney & Spector, 2005) and has been linked to various negative outcomes, it has been mostly treated as a chronic stressor (Almeida, 2005). In most studies, how frequently targets have experienced a set of rude behaviors over a relatively long period of time was the focus. For example, Cortina et al. (2001) examined impact of frequency of workplace incivility experience over the prior 5 years, and the same approach has been taken by other researchers (e.g., Lim & Lee, 2011). However, given the reported daily and weekly frequency of workplace incivility (Pearson et al., 2005; Pearson & Porath, 2002; Porath & Pearson, 2013), it is reasonable to believe that targets' workplace incivility experience varies across days. How this variation of daily workplace incivility experience influences targets, especially targets' short-term reactions remains unknown from past studies. Moreover, given that incivility is a mild form of workplace mistreatment, it is unclear whether it can lead to short-term emotional reactions. Therefore, we believe that a within-person daily diary

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design can help us explore effects of daily workplace incivility experience on targets' short-term reactions. We chose end-of-work negative affect as our short-term outcome variable because it assessed targets' momentary level of negative emotions as a result of work-related experiences including daily workplace incivility. Further, end-of-work negative affect has been found to spill over from work to home that end-of-work negative affect positively predicted negative affect at home (e.g., *Ilies, Wilson, & Wagner, 2009; Judge & Ilies, 2004; Song, Foo, & Uy, 2008*). Thus, understanding whether daily workplace incivility experience influences targets' end-of-work negative affect might help us understand how workplace incivility affect more distal outcomes after work such as work-to-family conflict (*Lim & Lee, 2011*). In addition, negative affect has been found to be negatively related to other important work-related outcomes such as job satisfaction (*Bowling, Eschleman, & Wang, 2010*). Taken together, we believe end-of-work negative affect is an important short-term emotional outcome of daily workplace incivility.

On the other hand, studies that examined potential moderators of relationships of workplace incivility with its outcomes are limited (*Sakurai & Jex, 2012*). It has been suggested that individual differences and situational factors might influence people's emotional reactions to experienced conflicts (*Ilies, Johnson, Judge, & Keeney, 2011*). Thus examining whether individual differences and situational factors buffer or exacerbate effects of workplace incivility seems important in that it will extend our understanding on patterns on targets' reactions. However, only a few individual difference variables have been examined as moderators, and they were largely studied in isolation. By including three individual difference variables in the current study, we were able to not only explore moderating effects of emotional stability that has been studied, but also variables that have been neglected (hostile attribution bias and locus of control) in the workplace incivility literature. We also examined whether one individual difference variable explains variance over and above the other two variables. Moreover, situational factors that have been examined as moderators in past studies were mainly concerned with resources such as family support (*Lim & Lee, 2011*) and organizational support (*Miner, Settles, Pratt-Hyatt, & Brady, 2012*). In contrast, the moderating effects of chronic stressors (*Almeida, 2005*), also called background stressors (*Gump & Matthews, 1999*), were not examined in the workplace incivility literature. Chronic stressors are suggested to deplete resources and influence individuals' reactions to negative events (*Gross et al., 2011*). Thus we chose two situational factors (workload and organizational constraints) as examples of chronic stressors, and examined their moderating effects.

To sum up, our study contributes to the current literature in several ways. First, to our knowledge, our study for the first time examined the short-term effect of workplace incivility episodes on targets' end-of-work negative affect using a within-person daily diary study. This could add to previous studies focusing on chronic experiences of workplace incivility (e.g., *Cortina et al., 2001; Lim & Lee, 2011*) or single incidents (*Bunk & Magley, 2013; Porath & Pearson, 2012*). Second, we examined the moderating effects of three personality traits (emotional stability, hostile attribution bias, and locus of control) and explored their effects together. Third, as far as we know, we for the first time examined the moderating effects of chronic stressors on relationships between workplace incivility and outcomes.

Theoretical Background

The Conservation of Resources (COR; *Hobfoll, 1989, 2001*) theory serves as our overarching theoretical framework. According to COR theory, individuals tend to gain, maintain, and invest resources including valued objects, conditions, personal characteristics, and energy. When individuals experience actual and/or threat of resource loss, they will experience psychological stress such as negative emotions (*Hobfoll, 2001; Zohar, Tzischinski, & Epstein, 2003*). We believe COR theory can be used to predict the direct effect of experienced workplace incivility on targets' short-term emotional reactions. If an individual experiences rude and discourteous behaviors at work, he or she might need to devote resources (e.g., attention and time) to coping with them, and thus lose personal resources. In addition, because perpetrators' intentions are not always clear (*Andersson & Pearson, 1999*), targets might need to devote additional resources to trying to figure out the intentions of perpetrators before subsequent coping actions. Further, targets might feel a threat to lose social resources because they might perceive that their social connections and relationships with others at work are at risk. Therefore, even of low severity, workplace incivility might lead to actual and/or threat of resource loss, and cause psychological distress (e.g., increased negative affect).

COR theory also suggests that individuals with more resources are less vulnerable to resource loss, and are more likely to gain further resources to cope with demands (*Hobfoll, 2001*). Therefore, compared with individuals with fewer resources, individuals with more resources are less likely to experience psychological distress when facing actual and/or threat of resources loss. The current study examined two types of factors that might affect individuals' resources, namely personal characteristics and situational conditions. Personal characteristics include three personality traits (emotional stability, hostile attribution bias, and locus of control), and situational conditions include workload and organizational constraints. In the present study we examined their potential moderating effects on the relationship between workplace incivility and targets' short-term emotional reactions.

Workplace Incivility and Negative Affect

According to COR theory (*Hobfoll, 1989, 2001*), people are likely to experience psychological distress when they face actual and/or threat of resource loss. When employees experience rude and uncivil behaviors at work, it is likely that they will first deplete some resources, such as positive mood. Further, targets might allocate other resources to cope with these experiences. For example, they might spend time figuring out the intention of perpetrators, devote cognitive resources to deciding what they need to do in response, and be worried about the potential threat of losing social connections. All these actual and/or threats of resource loss might interfere with employees' goals of completing work and sustaining social connections, and thus lead to negative emotions (*Zohar et al., 2003*). Over a working day, it is plausible that an individual who experiences more workplace incivility will have higher level of end-of-work negative affect.

Although there is theoretical basis for a positive effect of workplace incivility on targets' negative emotional reactions, studies that have directly examined the effect are limited. Among the few exceptions, *Porath and Pearson (2012)* found that retrospective report of workplace incivility experience was related to negative

emotions. Bunk and Magley (2013) also found that individuals retrospectively reported negative emotional responses to the workplace incivility incident that bothered them the most in the past year. Sakurai and Jex (2012) found that workplace incivility experience in the past month was positively related to targets' negative emotions over the same month. Whereas the three studies demonstrated a link between workplace incivility experience and negative emotions, they did not examine people's short-term emotional reactions to workplace incivility experience. On the one hand, although emotional reactions were studied in Porath and Pearson (2012) and Bunk and Magley (2013), they were measured by asking participants to recall their short-term emotional reactions following a single recalled workplace incivility incident. In this case, it is likely that the recalled emotional reactions may not completely capture targets' actual short-term emotional reactions because the incident might have occurred a few weeks or months ago, and the recalled single incident might not represent all workplace incivility incidents targets have experienced. On the other hand, Sakurai and Jex (2012) examined relationships between workplace incivility experience over a period of time (one month) and negative emotions experienced over the same period of time. Thus they did not examine targets' short-term emotional reactions, and overlooked the variations of people's workplace incivility experience and short-term emotional reactions across different days. Nevertheless, all three studies provided empirical evidence for the potential link between workplace incivility and targets' emotional reactions. In addition, previous studies using daily diary designs have linked other work stressors (e.g., injustice) and employees' short-term responses over a working day (e.g., Judge, Scott, & Ilies, 2006; Yang & Diefendorff, 2009). Building on the theoretical model and previous empirical findings, the current study extends what has been learned by examining effect of daily workplace incivility experience on targets' end-of-work negative affect. To better estimate the effect of workplace incivility on the actual change of negative affect over one working day, we included before-work negative affect as a control variable and proposed the following hypothesis for the main effect.

Hypothesis 1: Within-person, daily workplace incivility experience will positively predict end-of-work negative affect after controlling for before-work negative affect.

Moderating Effects of Personality Traits

Moderating Effect of Emotional Stability

Individuals with high emotional stability tend to be calm and confident, and have high level of self-esteem and low level of negative affectivity (Johnson & Ostendorf, 1993; Mount, Barrick, & Strauss, 1994; Tellegen, 1985). Therefore, emotional stability will not only serve as a personal resource to help employees deal with work demands, but also function as a facilitator of additional resources (Rubino, Perry, Milam, Spitzmueller, & Zapf, 2012), suggesting that individuals with high emotional stability tend to experience less psychological distress when facing negative events at work. Previous research has shown that people with high emotional stability reacted less negatively than people with low emotional stability in terms of well-being and behaviors (e.g., Bowling & Eschleman, 2010; Holtom, Burton, & Crossley, 2012; Rodell &

Judge, 2009; Taylor & Kluepfer, 2012; Wang, Liao, Zhan, & Shi, 2011) to experienced negative work events, supporting the moderating role of emotional stability on stressor-strain relationships. Similarly, Lim and Tai (2014) showed that experienced incivility at home is particularly strongly related to distress among individuals with low core self-evaluations (as a higher-order construct including emotional stability; Judge, Locke, & Durham, 1997).

The moderating effect of emotional stability on relationships between daily negative events and negative emotions has been also documented. For instance, Yang and Diefendorff (2009) found that the positive relationship between daily perceived supervisor injustice and negative emotions was weaker for individuals with high emotional stability than for individuals with low emotional stability. However, whether individuals with high emotional stability also tend to experience weaker negative emotional reactions to rather mild forms of interpersonal mistreatment such as daily workplace incivility experience remains unclear. Based on COR theory and previous findings, it is reasonable to believe that after experiencing workplace incivility over a working day, people with low emotional stability will have stronger end-of-work negative affect than people with high emotional stability do.

Hypothesis 2: Emotional stability will moderate the positive relationship between daily workplace incivility experience and end-of-work negative affect; specifically, the relationship will be stronger for individuals with low emotional stability than for individuals with high emotional stability.

Moderating Effect of Hostile Attribution Bias

Attribution style refers to individuals' tendency to make causal attributions of events, and these tendencies can bias people's causal explanations of these events (Martinko, Harvey, Sikora, & Douglas, 2011). Among different attribution styles (see review in Martinko, Douglas, & Harvey, 2006), hostile attribution bias has drawn increasing attention (Martinko et al., 2011). Hostile attribution bias is the extent to which people attribute hostile intentions to others (Crick & Dodge, 1996; Dodge & Crick, 1990). Individuals with higher hostile attribution bias are more likely to assume hostile intentions of other people than individuals with lower hostile attribution bias do, and thus are more likely to perceive actual and/or threat of resources loss and allocate more resources to cope with experienced negative events. Therefore, this tendency might lead to stronger negative emotional and behavioral reactions to experienced stressful events. This notion has been supported in previous findings. For example, hostile attribution bias moderates the relationship between psychological contract breach and employee deviance behaviors, with the positive relationships being stronger for individuals with high hostile attribution bias than for individuals with low hostile attributions bias (Chiu & Peng, 2008). In addition, Hoobler and Brass (2006) found the positive relationship between supervisors' perception of psychological contract violation and subordinates' report of abusive supervision was stronger for supervisors with high hostile attribution bias than for supervisors with low hostile attribution bias. Further, the only study that has examined how hostile attribution bias influences outcomes of workplace incivility found that the positive association between workplace incivility experience and engagement in deviance behaviors was stronger for individuals with high hostile

attribution bias than for those with low hostile attribution bias (Wu, Zhang, Chiu, Kwan, & He, 2014).

Previous studies suggest that hostile attribution bias plays an important role in relationships between stressful events (including workplace incivility) and individuals' behavioral responses. Individuals with high hostile attribution bias tend to engage in more antisocial behaviors in response to experienced negative events. However, whether hostile attribution bias influences individuals' emotional reactions to rude behaviors with ambiguous intent has never been examined in any published study that we know of. We believe that hostile attribution bias might have a more prominent effect on outcomes of workplace incivility given the ambiguous intent feature of workplace incivility. When experiencing the same rude behavior and the perpetrator's intent to harm is unclear, individuals with higher hostile attribution bias are more likely to believe that the perpetrator intends to be hostile to them and thus are more likely to perceive resource loss and fear further loss of resources, and thus have stronger negative emotional reactions. In contrast, individuals with lower hostile attribution bias are less likely to think that the perpetrator has the intention to harm and thus have weaker negative emotional reactions. Thus we proposed the following hypothesis.

Hypothesis 3: Hostile attribution bias will moderate the positive relationship between daily workplace incivility experience and end-of-work negative affect; specifically, the relationship will be stronger for individuals with high hostile attribution bias than for individuals with low hostile attribution bias.

Moderating Effect of Locus of Control

Locus of control (LOC; Rotter, 1966) refers to the extent to which individuals believe they or the external world have control over events happening to them. People with an internal locus of control tend to believe they have control over the events and are able to make change to the environment, whereas people with an external locus of control tend to believe that others or the external world, instead of themselves, have control over things and they don't have the ability to change the environment (Mitchell & Ambrose, 2012; Ryan & Deci, 2006). Researchers (e.g., Ito & Brotheridge, 2003; Ng & Feldman, 2011) proposed that internal locus of control is an important personal characteristic that is associated with other resources because individuals with an internal locus of control tend to take actions and obtain additional resources. On the contrary, individuals with an external locus of control perceive to have less control over experienced events, and might be more likely to perceive actual and/or threat of resource loss, have fewer resources to deal with resources loss, and have fewer opportunities of gaining additional resources. Therefore, individuals with an internal locus of control should experience less psychological distress when facing stressful events at work than individuals with an external locus of control do. Supporting this argument, the moderating effect of locus of control on various stressor-strain relationships has been studied and results indicated that individuals with an internal locus of control tend to deal with experienced negative events more positively than individuals with an external locus of control (e.g., Sandler & Lakey, 1982; Siu, Spector, Cooper, Lu, & Yu, 2002; Sprung & Jex, 2012). For example, people with an internal locus of control are more likely

to enact changes and use problem-focused coping, whereas people with an external locus of control are more likely to feel unable to make changes and thus have more dysfunctional coping (Sprung & Jex, 2012). In addition, people with low core self-evaluation (as a higher-order construct including locus of control; Judge et al., 1997) tend to experience more psychological distress after experiencing family incivility (Lim & Tai, 2014). Based on COR theory and previous findings, we predicted that after experiencing workplace incivility over a working day, individuals with an internal locus of control will have weaker end-of-work negative affect, whereas individuals with an external locus of control will have stronger end-of-work negative affect.

Hypothesis 4: Locus of control will moderate the positive relationship between daily workplace incivility experience and end-of-work negative affect; specifically, the relationship will be stronger for individuals with an external locus of control than for individuals with an internal locus of control.

Moderating Effect of Situational Factors

According to COR theory (Hobfoll, 1989, 2001), individuals with fewer resources are more vulnerable to resources loss, and will experience stronger psychological distress. As mentioned above, individuals' resources depend on the one hand on personality traits. On the other hand, individuals' resources are also affected by situational factors such as work demands. If individuals have already depleted resources in dealing with stable chronic work demands, they should be more vulnerable to stressful events, and experience more negative emotions (Zohar et al., 2003). Johns (2006) also argued that organizational contexts such as situational opportunities and constraints not only have main effects on employee behaviors, but also serve as potential moderators on functional relationships between variables. However, most previous studies on moderating effects of situational factors in the workplace incivility literature focus on resources such as different types of support (e.g., Lim & Lee, 2011; Miner et al., 2012), whereas the moderating effects of situational factors that deplete individuals' resources were largely neglected. Based on the theoretical propositions, we included two chronic stressors as examples of situational factors and examined their moderating effects on the relationship between workplace incivility and end-of-work negative affect. Chronic stressors are "persistent or recurrent difficulties of life" (Serido, Almeida, & Wethington, 2004, p. 18). Typical examples of chronic work stressors are high work demands and lack of control (Serido et al., 2004). These stressors tend to be constant across days, and have negative impact on individuals' health (Gump & Matthews, 1999). Chronic stressors are also suggested to influence individuals' reactions to daily stressful events because more chronic stressors might deplete people's resources and energy and thus exacerbate the negative effect of daily stressful events (Almeida, 2005; Gross et al., 2011; Gump & Matthews, 1999). A few previous studies have shown that the relationships between daily stressors and psychological distress are stronger when individuals experience more chronic stressors (Gross et al., 2011; Serido et al., 2004). In the current study, we proposed that two situational factors, namely workload and organizational constraints (Spector & Jex, 1998), as chronic stressors will moderate the effect of daily workplace incivility experience on targets'

end-of-work negative affect. We chose these two job stressors following examples in *Serido et al. (2004)*: workload represents work demands as it concerns the amount of work employees are supposed to do in general, whereas organizational constraints represents lack of control because it refers to situations that interfere with employees' efforts to complete their work and are generally not under their control. As outlined in more detail below, both work stressors deplete individuals' resources and hence are likely to increase their vulnerability to workplace incivility.

Moderating Effect of Workload

Workload refers to the amount of work an employee is required to do (*Spector & Jex, 1998*). Because it concerns employees' regular volume of work, workload should be relatively constant in general, and high workload might have negative effects on employees because high workload might result in feelings of uncertainty (*Spector & Jex, 1998*) and deplete employees' resources (*Zohar et al., 2003*). For example, high workload was found to be related to increased anxiety, depression, and frustration (*Spector & Jex, 1998*), higher risk of musculoskeletal symptoms (*Pekkarinen et al., 2013*), and more fatigue (*Grech, Neal, Yeo, Smith, & Humphreys, 2009*). Further, it is likely that high workload might strengthen the positive relationship between other negative events and employees' subsequent reactions because employees with high chronic workload tend to have fewer resources and less energy to deal with other negative events than individuals with low chronic workload do. Thus on days that employees also experience more workplace incivility, individuals with high chronic workload might have stronger end-of-work negative affect than individuals with low chronic workload do. Thus we proposed the following hypothesis.

Hypothesis 5: Workload will moderate the positive relationship between daily workplace incivility experience and end-of-work negative affect; specifically, the relationship will be stronger for individuals with high workload than for individuals with low workload.

Moderating Effect of Organizational Constraints

Organizational constraints refer to situations or events at work that interfere with individuals' efforts to achieve their work-related goals (*Spector & Jex, 1998*). *Sonnentag, Mojza, Demerouti, and Bakker (2012)* suggested that organizational constraints can inhibit people's recovery by depleting their energy, and that organizational constraints limit people's efforts to complete their work-related tasks because they have to deal with the constraints. For example, when there is not enough information to complete a work task, employees need to obtain further information by devoting time and cognitive resources. Therefore, organizational constraints tend to occupy and deplete employees' resources, leaving fewer resources for employees to cope with experienced workplace incivility. Thus, the effect of workplace incivility experience on end-of-work negative affect should be stronger for individuals with more organizational constraints because they have fewer resources and are less capable of recovering from their short-term negative emotional reactions to experienced workplace incivility.

Hypothesis 6: Organizational constraints will moderate the positive relationship between daily workplace incivility experience

and end-of-work negative affect; specifically, the relationship will be stronger for individuals with more organizational constraints than for individuals with fewer organizational constraints.

Method

Participant and Procedure

Our sample consisted of 76 full-time employees from a large communication company in a southern city of China. A total of 300 workers were informed about the study, and were given a booklet of surveys including a baseline survey that measured personality traits, workload, organizational constraints and demographics, and 10 daily surveys that measured their daily experience of workplace incivility and negative affect (before-work and end-of-work). The baseline survey was collected on a Friday. Participants were instructed to fill out one daily survey every day from the following Monday before they started working (before-work negative affect) and before they left work (daily workplace incivility experience and end-of-work negative affect) for 10 consecutive working days. Every day, the research assistant collected one daily survey from each participant before they left work. One hundred fifty people responded at least once during the process (overall response rate = 50%), but data from a final sample of 76 participants were included after dropping missing between-person level variables and unmatched surveys for 74 people (final response rate = 25.3%). The mean age of the final 76 participants was 29.20 years old ($SD = 5.93$), and the majority (78%) of them were female. Their mean tenure was 3.75 years ($SD = 3.16$), and they worked on average 50.40 hours per week ($SD = 6.35$). Our participants were working on various positions in the company (e.g., sales representatives, sales managers, clerks, managers, accountants).

Established measures in English were first translated into Chinese by a research assistant who is fluent in both Chinese and English. Chinese versions of measures were then back-translated to English by the third author who is also fluent in both Chinese and English. The first author and third author compared the original English measures with the back-translated English measures, and resolved discrepancies in both back-translated English measures and the Chinese measures. The final Chinese measures were administered to participants.

Measures

Daily workplace incivility experience. Daily workplace incivility was measured using the *Cortina et al. (2001)* seven-item Workplace Incivility Scale (WIS). The seven items were presented in the daily survey, and participants were asked to check whether each of the seven incivility experiences has happened to them during each day's work. If one experience is checked, one point is assigned to his or her incivility score. The index of workplace incivility experience was calculated by summing the corresponding incivility experience on that particular day.

Negative affect. Before-work negative affect and end-of-work negative affect were measured using a five-item version (*Jones, O'Connor, Conner, McMillan, & Ferguson, 2007*) of the Negative Affect Schedule (*Watson, Clark, & Tellegen, 1988*). Participants

were asked to indicate how much they felt each of the following items on a scale of 1 (*very slightly or not at all*) to 5 (*extremely*) at the moment of answering the questions: distressed, upset, scared, jittery, and afraid. A total score on the five items was used as negative affect score for before-work and end-of-work, respectively. Across 10 days, the average coefficient alpha for before-work negative affect was .88 (ranging from .85 to .91, $SD = .02$), and the average coefficient alpha for end-of-work negative affect was .89 (ranging from .84 to .92, $SD = .03$).

Trait emotional stability. Emotional stability was measured using the 10-item neuroticism scale from the International Personality Item Pool (IPIP; Goldberg et al., 2006). Participants were asked how close each item characterized them, using response choices from 1 (*very Accurate*) to 5 (*very Inaccurate*), and high scores indicated high emotional stability. A sample item was *I get upset easily*. Coefficient alpha was .73 in the current sample.

Trait hostile attribution bias (HAB). HAB was measured with Bal and O'Brien's (2010) 7-item scale. Participants were asked how close each item characterized them, using response choices from 1 (*disagree very much*) to 6 (*agree very much*), and high scores indicated high hostile attribution bias. A sample item was *When my things are missing, they have probably been stolen*. Coefficient alpha was .74 in the current sample.

Trait locus of control (LOC). LOC was measured using the 8-item short form of the Work Locus of Control Scale (WLCS; Spector, 1988). Participants were asked to indicate their agreement to each of the items, with response options ranging from 1 (*disagree very much*) to 6 (*agree very much*). A sample item is *Promotions are usually a matter of good fortune*. Higher score indicates an external locus of control, whereas lower score indicates an internal locus of control. Coefficient alpha was .65 in the current sample.

Chronic workload. Workload was measured using the five-item Quantitative Workload Inventory (Spector & Jex, 1998). Participants were asked how often each of the statement has happened to them. An example item was *How often is there a great deal to be done?* Response options ranged from 1 (*less than once per month or never*) to 5 (*several times per day*), with high scores indicating high workload. Coefficient alpha was .83 in the current study.

Chronic organizational constraints. Organizational constraints were measured using the 11-item Organizational Constraints Scale (Spector & Jex, 1998). Participants are asked to indicate how often they find it difficult or impossible to do their job because of each of 11 items, such as *Poor equipment or supplies*. Response options ranged from 1 (*less than once per month or never*) to 5 (*several times per day*), with high scores indicating more organizational constraints. Coefficient alpha was .92 in the current study.

Data Analysis

Hierarchical linear modeling (HLM 6.02; Raudenbush & Bryk, 2002) was used to test our hypotheses because the current data included variables from two levels, with days (Level 1) nested within individuals (Level 2). Level 1 variables were within individuals across the 10 days (daily workplace incivility experience, before-work negative affect, and end-of-work negative affect), whereas level 2 variables were between individuals (emotional

stability, hostile attribution bias, locus of control, workload, and organizational constraints). As recommended by Nezlek (2001) and Raudenbush and Bryk (2002), Level 1 predictors (workplace incivility experience and before-work negative affect) were centered around the mean of each individual across 10 days, whereas Level 2 predictors were centered around the grand mean of all individuals. Because centering Level 1 predictors loses between-person variance, the between-person difference on average level of workplace incivility experience of participants is neglected in the analysis. In this case, the stable differences between participants' experiences of workplace incivility were controlled in predicting end-of-work negative affect (Ilies, Schwind, & Heller, 2007). Thus to include the effect of participants' average level of workplace incivility experience on their daily end-of-work negative affect, we followed approaches in studies involving the same design (e.g., Meier, Gross, Spector, & Semmer, 2013) and used an aggregated measure of workplace incivility experience as a Level 2 predictor which was grand-mean centered. Following practices in studies with the same study design and similar sample size (e.g., Gabriel, Diefendorff, & Erickson, 2011; Gross et al., 2011), we used the restricted maximum-likelihood procedure in HLM to estimate the fixed and random parameters and used the robust standard error for significance tests. We used robust estimates because they were suggested to better make population-based inferences by overcoming the effect of sampling (Nezlek, 2011) and our sample size met the minimum number of 30 proposed by Nezlek (2011). Significant interactions indicated that the effect of daily workplace incivility on end-of-work negative affect depends on Level 2 variables (i.e., cross-level interaction). Simple slope tests were conducted following suggestion in Preacher, Curran, and Baue (2006) for significant interactions.

Results

To begin with, we tested null models to examine how much of the variances in daily workplace incivility experience and end-of-work negative affect were within- and between- individuals. Results showed that that 24% of the total variance of workplace incivility experience was within individuals ($ICC = .76$), whereas 38% of the total variance of end-of-work negative affect was within individuals ($ICC = .62$), which indicated that a multilevel modeling was appropriate for further analyses (Gross et al., 2011). Following suggestions by LaHuis and Ferguson (2009), we tested for significance of slope variance using the one-tailed likelihood ratio test by comparing the deviances between two models predicting end-of-work negative affect with daily incivility and before-work negative affect, with one model specifying the slope of daily incivility as fixed and the other model specifying the slope as random. The difference of deviances between the two models was significant, $\chi^2(3) = 46.98, p < .001$, indicating there was significant slope variance that could be explained by Level 2 predictors; hence, testing cross-level interactions was appropriate.

Table 1 shows means and standard deviations of all variables both within and between individuals. Further, zero-order correlations among variables are also included for both Level 1 variables and Level 2 variables, respectively.

Table 2 shows multilevel analysis results of the moderating effects of personality traits, and Table 3 shows results of the moderating effects of situational factors. As shown in both tables,

Table 1
Means and Standard Deviations of Variables of Studied Variables, and Correlations Among Them Within Each Level

Variable	M	SD	1	2	3	4	5	6	7	8	9
Daily measures ^a											
1. Incivility	1.77	0.67 (1.22)	—	.10	.14						
2. Before-work NA	1.81	0.42 (0.72)	.19	—	.28**						
3. End-of-work NA	2.05	0.54 (0.71)	.17	.92**	—						
Between-person measures ^b											
1. Gender	0.78										
2. Hour	50.36	6.35	.01								
3. Age	29.24	5.93	-.10	-.18							
4. Tenure	3.75	3.16	-.05	-.13	.54**						
5. Emotional stability	3.11	0.55	.05	.04	-.16	-.13	(.73)				
6. HAB	2.30	0.75	-.08	.22	-.02	.17	-.16	(.74)			
7. LOC	3.00	0.73	-.23	.22	-.05	.14	-.14	.38**	(.65)		
8. Workload	3.14	0.95	.40**	.18	-.22	.00	.00	.00	-.16	(.83)	
9. Constraints	2.43	0.88	.05	.25*	.14	.31*	-.22	.46**	.43**	.26*	(.92)

Note. Gender: 0 = Male, 1 = Female. For daily measures, between-persons correlations are below the diagonal, within-person correlations are above the diagonal; standard deviations outside of parentheses are within-person, and standard deviations in parentheses are between-person. Coefficients in parentheses in the diagonal = Coefficient alphas. Incivility = Workplace incivility experience; NA = Negative Affect; HAB = Hostile Attribution Bias; LOC = Locus of Control; Constraints = Organizational Constraints.

^a n = 759. ^b n = 65–76.

* p < .05. ** p < .01.

after controlling for daily before-work negative affect and aggregated measure of workplace incivility experience, daily workplace incivility experience positively predicted end-of-work negative affect, thus supporting Hypothesis 1. We calculated a pseudo R² using the formula suggested by Kreft and Leeuw (1998) and found that daily incivility explained 7% of the within-person variance of end-of-work negative affect. Further, following suggestions in Aguinis, Gottfredson, and Culpepper (2013) we calculated the proportions of total incivility slope variance explained by personality traits and situational factors in separate models. We found that the three personality traits together accounted for 62.5% of the total variance of incivility slope, while the two situational factors together accounted for 25% of the total variance of incivility slope.

Table 2
Multilevel Prediction of End-of-Work Negative Affect With Personality Traits

Variables	Coefficients
Intercept	1.76 (0.07)***
Level 1 predictors	
Daily incivility	0.19 (0.05)**
Before-work NA	0.29 (0.07)***
Level 2 predictors	
Aggregated incivility	0.03 (0.08)
Emotional stability	-0.07 (0.14)
Hostile attribution bias	0.26 (0.10)**
Locus of control	0.27 (0.09)**
Cross-level interactions	
Emotional stability * Incivility	-0.12 (0.06)*
Hostile attribution bias * Incivility	0.22 (0.10)*
Locus of control * Incivility	0.13 (0.05)**

Note. Entries show parameter estimates with standard errors in parentheses. Daily Incivility = Daily workplace incivility experience; NA = Negative affect.

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

Emotional stability was a significant moderator of the relationship between workplace incivility experience and end-of-work negative affect. Simple slope tests results showed that the relationship between daily workplace incivility experience and end-of-work negative affect was stronger when emotional stability was low ($\gamma = 0.26, p < .01$) than when emotional stability was high ($\gamma = 0.13, p < .05$), as shown in Figure 1. Thus Hypothesis 2 was supported.

Hostile attribution bias was also a significant moderator of the relationship between daily workplace incivility experience and end-of-work negative affect. Simple slope tests revealed that the relationship was only significant when hostile attribution bias was high ($\gamma = 0.36, p < .01$), but not when it was low ($\gamma = 0.03, p = .66$; see Figure 2). Therefore, Hypothesis 3 was also supported.

Similarly, locus of control moderated the relationship between daily workplace incivility and end-of-work negative affect. Simple

Table 3
Multilevel Prediction of End-of-Work Negative Affect With Situational Factors

Variables	Coefficients
Intercept	1.76 (0.08)***
Level 1 Predictors	
Daily incivility	0.16 (0.05)**
Before-work NA	0.30 (0.07)***
Level 2 moderators	
Aggregated incivility	0.02 (0.08)
Workload	0.04 (0.13)
Organizational constraints	0.03 (0.01)*
Cross-level interactions	
Workload * Incivility	-0.10 (0.05)*
Organizational constraints * Incivility	0.01 (0.01)*

Note. Entries show parameter estimates with standard errors in parentheses. Daily Incivility = Daily workplace incivility experience; NA = Negative affect.

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

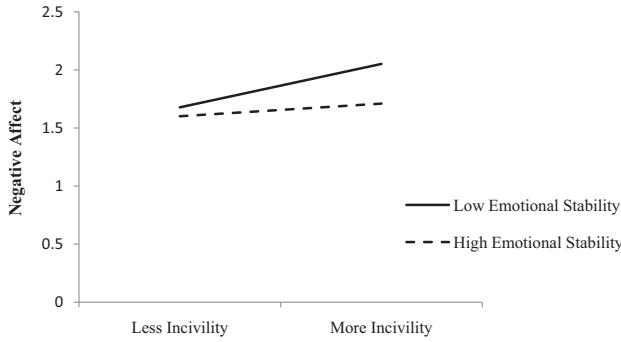


Figure 1. Cross-level interaction between daily workplace incivility experience and emotional stability in predicting end-of-work negative affect.

slope tests revealed that daily workplace incivility was positively related to end-of-work negative affect for individuals with an external locus of control ($\gamma = 0.29, p < .001$), but they were not related for individuals with an internal locus of control ($\gamma = 0.10, p = .13$). The pattern shown in Figure 3 indicates that Hypothesis 4 was supported.

Workload was also a significant moderator, but simple slope tests results indicated that daily workplace incivility experience was positively related to end-of-work negative affect when chronic workload was low ($\gamma = 0.25, p < .001$), but not when chronic workload was high ($\gamma = 0.09, p = .41$). The pattern is shown in Figure 4 and it is opposite to our prediction; thus Hypothesis 5 was not supported.

On the other hand, organizational constraints significantly moderated the positive relationship between daily workplace incivility experience and end-of-work negative affect, and the relationship was stronger for individuals with more chronic organizational constraints ($\gamma = 0.17, p < .01$) than for individuals with fewer chronic organizational constraints ($\gamma = 0.14, p < .05$). Figure 5 shows the pattern and Hypothesis 6 was supported.

Discussion

Based on Conservation of Resources theory (COR; Hobfoll, 1989), we proposed that daily workplace incivility experience would positively predict daily end-of-work negative affect, and the

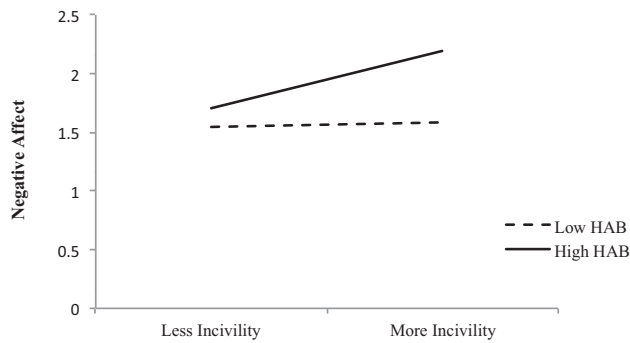


Figure 2. Cross-level interaction between daily workplace incivility experience and hostile attribution bias (HAB) in predicting end-of-work negative affect.

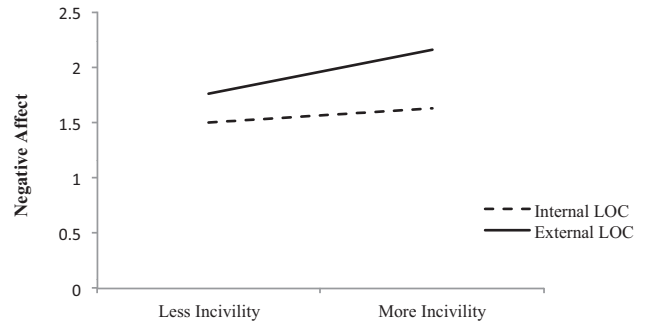


Figure 3. Cross-level interaction between daily workplace incivility experience and locus of control (LOC) in predicting end-of-work negative affect.

relationship would be moderated by emotional stability, hostile attribution bias, locus of control, chronic workload, and chronic organizational constraints. Our results supported all but one of these propositions by finding that daily workplace incivility experience positively predicted participants' end-of-work negative affect while controlling for before-work negative affect, and the relationship was stronger for people with low emotional stability, high hostile attribution bias, an external locus of control, and people with more organizational constraints as compared with people with high emotional stability, low hostile attribution bias, an internal locus of control, and people with fewer organizational constraints. Although the moderating effect of workload was significant, the relationship between daily workplace incivility experience and end-of-work negative affect was stronger when workload was low as compared with when it was high, which was opposite to our prediction.

The positive effect of daily workplace incivility experience on end-of-work negative affect is consistent with COR theory that actual and/or threat of resource loss will lead to increased psychological distress. Although of low intensity and ambiguous intent, the high prevalence of workplace incivility has made it critical to examine how workplace incivility experience affects targets, especially over a shorter period of time. A recent meta-analysis has summarized that experienced workplace incivility at work was

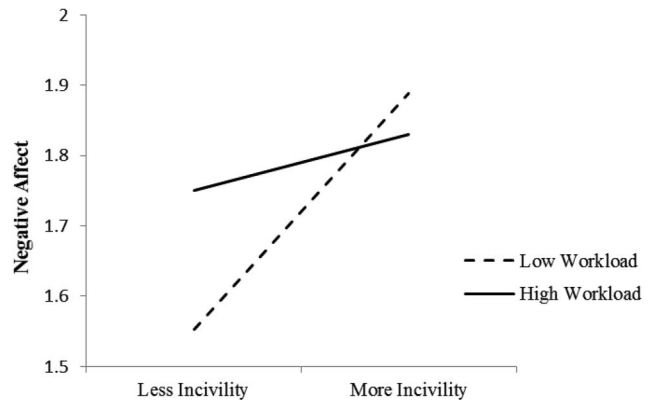


Figure 4. Cross-level interaction between daily workplace incivility experience and workload in predicting end-of-work negative affect.

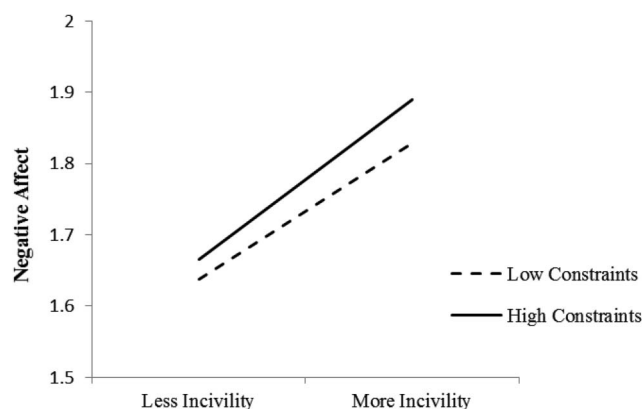


Figure 5. Cross-level interaction between daily workplace incivility experience and organizational constraints in predicting end-of-work negative affect.

related to decreased job satisfaction, increased turnover intention, decreased psychological and physical well-being, and decreased affective commitment (Hershcovis, 2011), but most of the studies were treating workplace incivility as a chronic stressor (e.g., Cortina et al., 2001; Lim & Lee, 2011). Results of the current study extend our understanding on the effect of workplace incivility experience to targets' short-term emotional reactions, and suggest that when an individual experiences more workplace incivility over a working day than usual he or she tends to have stronger negative affect when he or she leaves work that day. This provides additional evidence for the previously established relationship between workplace incivility and emotional reactions (Bunk & Magley, 2013; Porath & Pearson, 2012; Sakurai & Jex, 2012), and might also help us better understand the positive relationships between workplace incivility experience and other distal outcomes. For example, constantly increased end-of-work negative affect over a longer period might lead to impaired well-being (Lim et al., 2008), and high end-of-work negative affect might cause work-family conflict (Lim & Lee, 2011), because negative affect at the end of work could spill over to negative affect at home (Judge & Ilies, 2004; Song et al., 2008). Further, negative emotions were found to lead to increased negative behaviors (e.g., Sakurai & Jex, 2012; Spector & Fox, 2002). Thus increased negative emotional reactions to workplace incivility experience might also lead to subsequent negative behaviors of targets, resulting in a positive relationship between workplace incivility experience and targets' own counterproductive work behavior (e.g., Penney & Spector, 2005; Sakurai & Jex, 2012; Wu et al., 2014). It is worth pointing out that aggregated incivility experience did not predict end-of-work negative affect, suggesting that incivility experiences that differ between individuals did not contribute to the variability of end-of-work negative affect. Instead, it is the within-person variability of incivility experience that influences end-of-work negative affect. This finding further highlights our contribution of using a within-person design to examine the effect of workplace incivility on targets' emotional reactions beyond previous cross-sectional designs and between-person designs.

The significant moderating effects of emotional stability, hostile attribution bias, and locus of control not only have provided further

evidence for the moderating role of individual characteristics in COR theory, but also extend our understanding on how people with different personality traits react to workplace incivility. First, the moderating effect of emotional stability is consistent with previous findings, suggesting that individuals with low emotional stability tend to have stronger negative emotional reactions to experienced workplace incivility, which is similar to how they react to other experienced negative events (e.g., Rodell & Judge, 2009; Wang et al., 2011). Second, our study for the first time examined the moderating effect of hostile attribution bias and locus of control on the effect of workplace incivility on targets' short-term emotional reactions. We found that the positive relationship between daily workplace incivility experience and end-of-work negative affect was stronger for individuals with high hostile attribution bias and individuals with an external locus of control as compared to individuals with low hostile attribution bias and individuals with an internal locus of control, respectively. Because individuals with high hostile attribution bias tend to assume hostile intentions of perpetrators of workplace incivility, it is likely that they will feel the rude and disrespectful behaviors were intentionally harmful to them, perceive more actual and/or threat of resource loss, and then experience stronger psychological distress such as negative emotions. In addition, because individuals with an external locus of control tend to believe that they do not have control over the situations and they can't change the situation, it is likely that they have fewer resources to start with, are less capable of gaining additional resources, are more threatened by resource loss, and thus have stronger negative emotional reactions after experiencing these situations. These findings might shed light on the underlying mechanism of moderating effects of hostile attribution bias and locus of control on workplace incivility experience and targets' own negative behaviors (Sprung & Jex, 2012; Wu et al., 2014) because the increased negative emotions might lead to negative behaviors (Spector & Fox, 2002). It needs to be pointed out that that all three personality traits remained significant moderators when they were included in the model together, suggesting that each of them has unique contribution in moderating the relationship between daily workplace incivility experience and end-of-work negative affect.

We also examined the moderating effects of two chronic stressors as examples of situational conditions -workload and organizational constraints. Chronic stressors are continually present at people's work, and they are suggested to influence how people react to acute stressors (Almeida, 2005). Our results showed that chronic workload significantly moderated the relationship between daily workplace incivility and end-of-work negative affect, with the relationship being stronger for individuals with low as compared with high chronic workload. One possible explanation for this unexpected pattern is that workload can also be considered as a challenge stressor (Rodell & Judge, 2009; Sonnentag et al., 2012). Thus high workload might not necessarily deplete people's resources and energy because employees might consider high workload as opportunities for growth and learning (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). On the other hand, individuals with low workload might be less engaged in work tasks, spend more time worrying about interpersonal interactions with others, ruminate longer after experiencing workplace incivility, and thus perceive more actual and/or threat of resource loss and have stronger negative emotions after experiencing workplace

incivility. Nevertheless, future studies should try to further examine this unexpected finding.

Organizational constraints, on the other hand, tend to be constantly interfering with employees' efforts of doing their job, are considered as a hindrance stressor and likely to elicit negative reactions in general (Rodell & Judge, 2009). Because organizational constraints deplete people's resources and energy (Sonnentag et al., 2012), it is likely that individuals with more organizational constraints are more vulnerable to actual and/or threat of resource loss. Thus, on days that employees experience more workplace incivility, their negative emotional reactions tend to be stronger for individuals who have more organizational constraints than for those with fewer organizational constraints. To our knowledge, this is the first study to examine the moderating effect of situational factors on outcomes of workplace incivility, and its effect is consistent with what was found in other studies examining the moderating effect of organizational constraints (e.g., Sonnentag et al., 2012). Thus this finding provides further evidence for the necessity of reducing job stressors in organizations.

Limitations

The current study has several limitations. First, our sample is from one single organization in China. Thus, caution should be taken when considering the generalization of our results. Second, although we adopted a daily diary design that could better capture people's experiences and responses (Jex, Geimer, Clark, Guidroz, & Yugo, 2010), our data were based on self-reported surveys that measured workplace incivility and end-of-work negative affect at the same time, which might raise concerns about common method variance. However, the interactions found in the current study would be difficult to detect if common method variance was present (Siemsen, Roth, & Oliveira, 2010). Nevertheless, if Level 2 variables (personality traits and chronic stressors) could be measured from other sources, this might reduce concerns about common method variance. Third, it is likely that some participants might have over- or underreported their workplace incivility experiences. Future studies might consider using alternative ways of measuring incivility, such as asking employees to record their experience immediately after each workplace incivility incident (i.e., event sampling).

Fourth, there are several methodological limitations. For example, we had a relatively low response rate of 25% compared with other organizational research (Baruch & Holtom, 2008). In addition, because participants were instructed to check whether each of the 7 incivility experiences had happened to them, we were not able to track the frequencies of the incivility experiences. As a consequence, our measure might suffer from range restriction, resulting in restricted variance and hence the effect sizes are likely to be underestimated. We therefore suggest that future research should use a measure that uses frequency as a response format.

Implications and Future Research

Our study has several contributions. First, we provide empirical support for COR theory (Hobfoll, 1989, 2001) by finding that daily experience of negative events (i.e., workplace incivility) could lead to increased psychological distress (negative emotions). Further, using a daily diary within-person design, we are able to extend the

current literature of workplace incivility by demonstrating that daily workplace incivility experience predicts end-of-work negative affect. This might extend our understanding of how workplace incivility might lead to further impaired well-being and negative behaviors of targets. Second, the moderating effects of personality traits (emotional stability, hostile attribution bias, and locus of control) and situational factors (workload and organizational constraints) could help us understand how individual difference variables and situational factors buffer or exacerbate effects of workplace incivility. Specifically, we found that high emotional stability, low hostile attribution bias, and internal locus of control buffer the negative effect of daily workplace incivility experience, whereas low chronic workload and high chronic organizational constraints tend to exacerbate the negative effect.

On the practical side, although workplace incivility is a less intense form of mistreatment than personal aggression (Taylor & Kluepfer, 2012), our results show that it is still necessary for organizations to reduce its occurrence because it does have short-term negative effect on employees. Thus organizations should not wait until there are more distal outcomes to take actions to address workplace incivility. One possible solution is through civility interventions. For example, an organizational intervention (Civility, Respect, and Engagement in the Workplace; CREW) was designed particularly targeting at workplace incivility in Veterans Hospital Administration settings by Osatuke, Moore, Ward, Dyrenforth, and Belton (2009). The intervention includes a 6-month program in which participants work with researchers to solve problems to promote civil interactions among employees. The same intervention was found to be effective in reducing occurrence of workplace incivility (Leiter, Day, Oore, & Spence Laschinger, 2012; Leiter, Laschinger, Day, & Oore, 2011). Another possible way is through promoting a positive civility climate (Walsh et al., 2012), but it needs further empirical evidence.

Furthermore, workplace incivility occurs often at work and sometimes is unavoidable. For situations like that, our findings provide support for use of personality tests in employee selection by selecting employees of certain targeted traits (i.e., high emotional stability, low hostile attribution bias, and internal locus of control) because they will react to the workplace incivility experiences less negatively; on the other hand, it is important for organizations to reduce organizational constraints because they not only have main direct negative effects (e.g., Bowling & Eschleman, 2010; Hershcovis et al., 2007; Liu, Nauta, Li, & Fan, 2010), but also exacerbate negative effects of other work stressor (workplace incivility). This is in line with other researchers' appeal to reduce chronic stressors at work (e.g., Gump & Matthews, 1999). Meanwhile, assigning employees a reasonable amount of workload seems important because high workload has negative main effects (Spector & Jex, 1998), whereas low workload strengthens negative effects of other negative events (i.e., workplace incivility).

Future research can extend our understanding of workplace incivility in the following avenues. First, although we establish a link between daily workplace incivility experience and end-of-work negative affect, future researchers might want to examine the mediating effect of short-term emotional reactions in the dynamic interactions between workplace incivility experience and targets' own negative behaviors, and in the relationships between workplace incivility experience and more distal outcomes such as job attitudes, health and well-being, behaviors, and outcomes outside

of work. Second, we did not differentiate between sources of workplace incivility. It is likely that incivility from different sources might have different effects on employees' short-term emotional reactions, and then long-term outcomes. Thus future research could compare and contrast effects of supervisor incivility, coworker incivility, subordinate incivility, and customer incivility. Third, because of the ambiguous intent of workplace incivility, how targets appraise it might influence how they react. Although we proposed and found that hostile attribution bias moderates the effect of workplace incivility on emotional reactions, we did not explicitly examine targets' actual appraisals of perpetrators' intentions of the rude behaviors participants encountered. Future research might want to examine this and uncover the underlying mechanism of the moderating effect of hostile attribution bias. Lastly, the moderating role of additional individual difference variables and chronic stressors might be interesting topics to explore on effects of workplace incivility.

Conclusions

The current study demonstrated that when an individual experiences more workplace incivility during a day's work than usual, he or she is more likely to have stronger negative affect before leaving work on the same day. Further, this likelihood is higher for those with low emotional stability, high hostile attribution bias, and an external locus of control, and those who have low workload and more organizational constraints at work. These findings suggest that workplace incivility as a daily negative event should be reduced at work by management, especially for people of certain personality traits and people working with less workload and more organizational constraints.

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(Appendix follows)

Appendix

Equations for Cross-Level Moderations

Equations for Personality Traits Moderating the Relationship Between Daily Workplace Incivility Experience and End-of-Work Negative Affect

Level 1 (Within-Person)

$$Y_{ij} = b_{0j} + b_{1j}(X_{1ij}) + b_{2j}(X_{2ij}) + r_{ij}$$

Level 2 (Between-Person)

$$b_{0j} = \gamma_{00} + \gamma_{01}(W_{1j}) + \gamma_{02}(W_{2j}) + \gamma_{03}(W_{3j}) + \gamma_{04}(W_{4j}) + u_{0j}$$

$$b_{1j} = \gamma_{10} + \gamma_{11}(W_{2j}) + \gamma_{12}(W_{3j}) + \gamma_{13}(W_{4j}) + u_{1j}$$

$$b_{2j} = \gamma_{20} + u_{2j}$$

Equations for Situational Factors Moderating the Relationship Between Daily Workplace Incivility Experience and End-of-Work Negative Affect

Level 1 (Within-Person)

$$Y_{ij} = b_{0j} + b_{1j}(X_{1ij}) + b_{2j}(X_{2ij}) + r_{ij}$$

Level 2 (Between-Person)

$$b_{0j} = \gamma_{00} + \gamma_{01}(W_{1j}) + \gamma_{02}(W_{5j}) + \gamma_{03}(W_{6j}) + u_{0j}$$

$$b_{1j} = \gamma_{10} + \gamma_{11}(W_{5j}) + \gamma_{12}(W_{6j}) + u_{1j}$$

$$b_{2j} = \gamma_{20} + u_{2j}$$

Note

Y_{ij} : End-of-work negative affect for person j in day i

X_{1ij} : Workplace incivility for person j in day i

X_{2ij} : Before-work negative affect for person j in day i

W_{1j} : Aggregated workplace incivility for person j

W_{2j} : Emotional stability for person j

W_{3j} : Hostile attribution bias for person j

W_{4j} : Locus of control for person j

W_{5j} : Workload for person j

W_{6j} : Organizational constraints for person j

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