Daily Cyber Incivility and Distress: The Moderating Roles of Resources at Work and Home

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Given that many employees use e-mail for work communication on a daily basis, this study examined within-person relationships between day-level incivility via work e-mail (cyber incivility) and employee outcomes. Using resource-based theories, we examined two resources (i.e., job control, psychological detachment from work) that may alleviate the effects of cyber incivility on distress. Daily survey data collected over 4 consecutive workdays from 96 employees were analyzed using hierarchical linear modeling. Results showed that on days when employees experienced cyber incivility, they reported higher affective and physical distress at the end of the workday that, in turn, was associated with higher distress the next morning. Job control attenuated the concurrent relationships between cyber incivility and both types of distress at work, while psychological detachment from work in the evening weakened the lagged relationships between end-of-workday distress and distress the following morning. These findings shed light on cyber incivility as a daily stressor and on the importance of resources in both the work and home domains that can help reduce the incivility-related stress process. Theoretical and practical implications, limitations, and future research directions are discussed.

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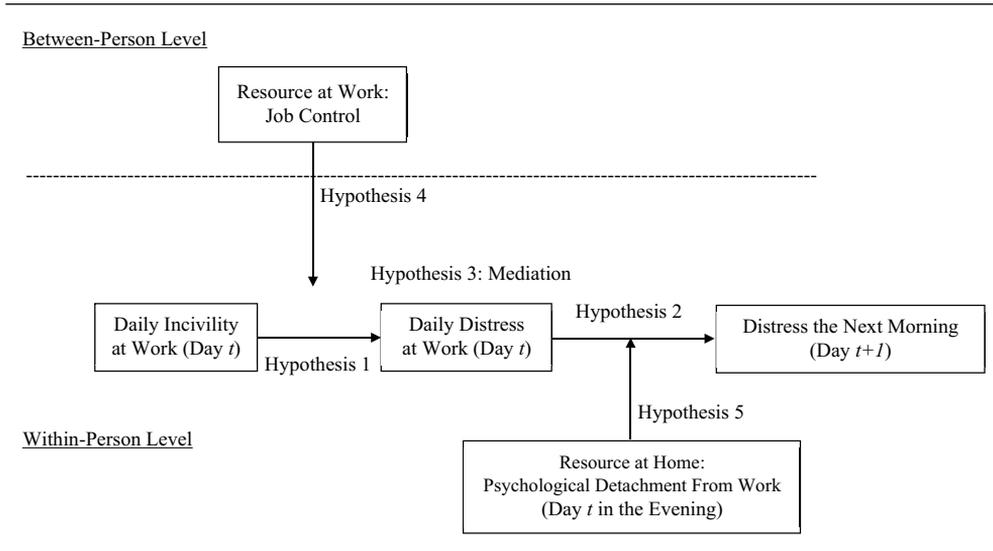
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Interacting with others in the workplace (e.g., coworkers, supervisors, clients/customers) is an essential part of most employees' day-to-day work life. Social interactions on the job, however, are not always pleasant. Disrespectful or inconsiderate behaviors and comments made by others at work (i.e., workplace incivility; Andersson & Pearson, 1999) have been linked to distress indicators, such as depression, burnout, and job dissatisfaction (e.g., Cortina, Magley, Williams, & Langhout, 2001; S. Lim, Cortina, & Magley, 2008; S. Lim & Lee, 2011; Sliter, Jex, Wolford, & McInnerney, 2010). Although past research has focused mainly on face-to-face occurrences of incivility, a few recent studies have suggested that incivility also can be experienced online; the latter has been termed cyber incivility and refers to uncivil behaviors and comments manifested through information and communication technology, such as e-mail and text messages (Giumetti, Hatfield, Scisco, Schroeder, Muth, & Kowalski, 2013; Giumetti, McKibben, Hatfield, Schroeder, & Kowalski, 2012; V. K. G. Lim & Teo, 2009). In the current study, our focus is on *incivility via work e-mail* (hereinafter, *cyber incivility*).

A recent Google search of the phrase "rude e-mail at work" provided a long list of postings and Web sites on how to respond to rude e-mail and uncivil e-mail senders at work, indicating the prevalence of such experiences in the workplace. According to the national study of "networked workers," over 60% of U.S. workers reported using e-mail on the job, and some note that e-mail adds stress to their work lives despite the increased efficiency in work communication (Madden & Jones, 2008). With e-mail being a primary mode of work-related communication for many organizations, cyber incivility is likely to occur. Furthermore, cyber incivility may easily occur because nonverbal cues as well as norms for appropriate e-mail use are often missing (Byron, 2008; Giumetti et al., 2013). However, only a few studies (Giumetti et al., 2012; Giumetti et al., 2013; V. K. G. Lim & Teo, 2009) have investigated workplace cyber incivility so far, and as a result, very little is known about its role in employee outcomes. Thus, this study aims to investigate daily experiences of cyber incivility among employees who use e-mail for work.

Drawing on resource-based theories (Bakker & Demerouti, 2007; Hobfoll, 1989), we suggest that dealing with cyber incivility drains psychological and physical resources that are already taxed by work demands, resulting in greater distress. Specifically, we examine within-individual relationships between day-level cyber incivility and affective and physical distress at the end of a workday. This daily assessment can provide stronger evidence for cyber incivility as a "daily stressor" by capturing within-individual fluctuations in cyber incivility and distress. More importantly, an inclusion of time lags in measuring stressors and strains can help better understand how stressor-strain relationships unfold over time (George & Jones, 2000). With this in mind, we further examine whether day-specific cyber incivility (Day t) is related to distress the following morning (Day $t+1$) through day-specific distress (Day t), which would indicate lagged effects. Given the recent indication that incivility-induced distress may spill over to the home domain, affecting employees after work (Ferguson, 2012; S. Lim & Lee, 2011), we investigate the duration of this particular stressor-strain relationship and its underlying mechanism in more detail.

Figure 1
Conceptual Model

Between-Person Level

Resource at Work:
Job Control

- -
Hypothesis 4

Hypothesis 3: Mediation

Daily Incivility
at Work (Day t)
Hypothesis 1

Hypothesis 2
Daily Distress
at Work (Day t)

Distress the Next Morning
(Day $t+1$)

Within-Person Level

Hypothesis 5

Resource at Home:
Psychological Detachment From Work
(Day t in the Evening)

Furthermore, resource-based theories point to the potential buffering role of resources against stressful experiences. Specifically, resource-providing conditions or experiences can help individuals better cope with stress (Bakker & Demerouti, 2007; Hobfoll, 1989). Therefore, we first examine whether *job control* as a work resource mitigates the concurrent within-person relationships between cyber incivility and employee distress. While job control has generally been found to be associated with employee well-being (see Jones & Fletcher, 2003, for a review), it has not yet been examined in the context of cyber incivility. Furthermore, given that the adverse effects of cyber incivility may spill over into the home domain (Ferguson, 2012), we additionally examine a resource in the home domain that may buffer potential effects of cyber incivility. Specifically, we examine *psychological detachment from work in the evening* (i.e., mental disengagement from work; Sonnentag & Bayer, 2005) as a resource at home that may reduce the distress spillover from one day to the next. Thus, the present study contributes to the literature by identifying potential stress buffers both at work and home against the adverse effects of cyber incivility. The results of this study can also provide practical insights into *how* and *when* organizations may help employees reduce stress related to cyber incivility. Figure 1 depicts our conceptual model.

E-Mail Communication and Cyber Incivility at Work

Online interactions via work e-mail have several characteristics that may enhance the probability of experiencing cyber incivility and employee distress. First, while workgroup members usually have "norms of civility" that are followed in face-to-face meetings, such norms tend to be less explicit in computer-mediated communications (McLeod, Baron, Marti, & Yoon, 1997). As such, individuals may say and do things online inadvertently that they would not do in face-to-face interactions. Second, accurate communications are difficult

via e-mail because of the lack of important nonverbal and situational cues (e.g., facial expression, tone of voice) that enable a message sender to self-correct (e.g., clarify a statement, add/reduce the emotional aspect of a message) if needed (Byron, 2008; Friedman & Currall, 2003). Furthermore, limited and delayed feedback in e-mail communications often makes it hard to resolve potential ambiguity in e-mail content (Byron). Therefore, these aspects of e-mail communication are conducive to perceptions of cyber incivility among employees who use e-mail for work.

Cyber incivility can be conceptualized as an interpersonal stressor that includes sending e-mails in a discourteous tone, saying something hurtful through e-mail, paying little attention to a request or statement via e-mail, or using e-mail for time-sensitive messages (e.g., canceling or scheduling a meeting on short notice; V. K. G. Lim & Teo, 2009). Employees with a heavy reliance on e-mail communication for work may be especially vulnerable to cyber incivility experiences. Moreover, employees may have relatively little control over occurrences of cyber incivility because they are usually not allowed to block or ignore e-mails from their supervisor, coworkers, or customers/clients. Accordingly, it may be difficult for employees to avoid or minimize uncivil e-mails. In sum, the preceding characteristics indicative of cyber incivility suggest that it may constitute a prevalent work stressor affecting many employees on a day-to-day basis.

Theoretical Background

We draw on several theoretical frameworks that may help to conceptualize and understand the relationships between cyber incivility and employee outcomes. All of them relate to the gain and loss of resources, although "resources" are conceptualized somewhat differently in each theory. First, conservation of resources theory (COR; Hobfoll, 1989) encompasses various resources on a more general level, such as objects (e.g., tools), energies, and conditions (e.g., positive mood, quality relationship). According to COR theory, individuals are motivated to gain resources and avoid resource loss as the threat of resource loss and actual resource loss are associated with increased distress. Dealing with demands in an environment (e.g., job stressors) results in resource depletion (e.g., drained energy or attention), which manifests as increased strain. Individuals, however, can reduce the stress experiences if they have sufficient resources to draw on. In other words, resources are thought to serve a protective function that guards against resource loss.

Compared to COR, job demands-resources theory (JD-R; Bakker & Demerouti, 2007) focuses on two job-related factors that predict employee outcomes: demands and resources. It posits that strain occurs when employees face high demands (stressors) with little resources at work. JD-R defines job demands as various physical, psychological, or social aspects of the job that require employees to expend effort (emotional, cognitive, physical) and can lead to strain. Thus, given the aforementioned distressing nature of cyber incivility, cyber incivility can be conceptualized as a job demand. Job resources include any aspects of the job (e.g., job control) that can reduce demands and/or the related psychological and physiological costs of the demands.

Similarly, the effort-recovery model (ERM; Meijman & Mulder, 1998) posits that a continuous exposure to work demands and stressors leads to load reactions (e.g., increased distress), which is comparable to the concept of resource loss. Once demands and stressors are removed temporarily, individuals' functional systems (e.g., cognitive, emotional, physiological) can

recuperate (comparable to resource gains). In that sense, the ERM highlights the importance of recovery experiences in distancing oneself from the demands and stressors experienced at work (e.g., psychological detachment from work).

Finally, the next two models can help clarify how resource loss, in the form of distress at work on a given day, can translate into distress the following morning. According to the affect spillover model (Judge & Ilies, 2004; Williams & Alliger, 1994), negative affective states often elicit one's recollections of negative events and experiences, thereby prolonging negative affect at home. In the context of this study, we propose that negative affective states, such as affective distress resulting from experienced cyber incivility, increase rumination about the uncivil incident, which extends distress. In addition, the perseverative cognition model of stress (Brosschot, Gerin, & Thayer, 2006; Brosschot, Van Dijk, & Thayer, 2007) posits that dwelling on negative events in the evening prolongs one's physiological activation even during sleep (e.g., cardiovascular and endocrine activity), which hinders recovery from stress at home. These models overlap with COR theory in that disturbed evening hours after a stressful workday may prevent employees from restoring lost resources that are needed the next workday (cf. Hobfoll, 1989). In sum, an integration of these theories and models allows us to conceptualize how and when cyber incivility leads to distress, as well as to identify conditions and experiences that may mitigate such relationships.

Development of Hypotheses

Concurrent Relationships Between Daily Cyber Incivility and Distress on the Job

Two types of distress are examined in the current study, namely, affective and physical distress. Affective distress includes various negative emotions (e.g., annoyed, anxious, discouraged) that employees may experience as short-term reactions to stressors (cf. Van Katwyk, Fox, Spector, & Kelloway, 2000). Physical distress indicates common physical manifestations of short-term stress responses, such as headaches, nausea, and chest pain (Spector & Jex, 1998). These physical symptoms are the by-product of immediate physiological reactions that are often caused by experiencing work stressors (see Nixon, Mazzola, Bauer, Krueger, & Spector, 2011, for a review).

Workplace cyber incivility can be seen as an interpersonal stressor in the workplace (Giumetti et al., 2012). Previous cross-sectional research has linked cyber incivility to burnout, turnover intentions, job dissatisfaction, and counterproductive behaviors (e.g., leaving work early without permission; Giumetti et al., 2012; V. K. G. Lim & Teo, 2009), all of which may be seen as a response to this particular work stressor. While research on *daily* cyber incivility is still very limited, we are aware of two day-level studies that found relationships between interpersonal conflict and affective distress, suggesting that interpersonal stressors may lead to affective outcomes (Ilies, Johnson, Judge, & Keeney, 2011; Volmer, Binnewies, Sonnentag, & Niessen, 2012). Therefore, we propose that on days when employees experience cyber incivility, they will report higher levels of affective distress at work. Specifically, linking back to COR theory, we contend that cyber incivility drains one's psychological resources evidenced by higher affective distress at the end of a workday. For example, interpersonal interactions via work e-mail are often perceived as less positive (i.e., neutrality effect) and more negative (i.e., negativity effect) than the sender intended because of reasons

previously discussed (lack of established rules for appropriate e-mail use and social cues; Byron, 2008). As such, cyber incivility (e.g., being ignored via e-mail, receiving condescending or sarcastic e-mails) is likely to elicit negative emotions, such as frustration, confusion, and anxiety. Moreover, incivility targets tend to struggle with the instigator's ambiguous intent to harm and proper reactions to the instigator (S. Lim et al., 2008), resulting in increased distress. A work simulation experiment also showed that cyber incivility led to affective distress (Giumetti et al., 2013). Thus, we hypothesize the following:

> *Hypothesis 1a:* Within individuals, day-specific cyber incivility will be positively associated with day-specific affective distress on the job.

We further propose that cyber incivility will be linked to physical distress. So far, very little empirical evidence exists on physical outcomes of face-to-face incivility or cyber incivility. Miner, Settles, Pratt-Hyatt, and Brady (2012) found no relationship between experienced incivility and physical illness, whereas S. Lim et al. (2008) found a positive, though weak, relationship. One explanation for the apparent weak findings may be the focus on between-person rather than within-person relationships or an inadequate (i.e., too short or too long) time frame used to capture the link between incivility and physical distress. However, despite the use of a within-person design, Giumetti et al. (2013) did not find an effect of cyber incivility on physiological distress (i.e., cardiovascular activity). The authors speculated that a single instance of incivility in an experimental setting may not elicit instantaneous physiological responses. Accordingly, a field study examining naturally occurring work events within individuals found that negative events were associated with higher levels of blood pressure and physical symptoms after work (Bono, Glomb, Shen, Kim, & Koch, 2013). This finding suggests that experiencing negative events, such as cyber incivility, may exhaust employees' physical resources. Connecting this finding to COR theory, we propose that dealing with cyber incivility while trying to complete job tasks will require additional effort, further draining employees' physical resources; therefore, higher physical distress will be manifest at the end of the workday. Thus, we hypothesize that cyber incivility on a given workday is associated with elevated levels of physical distress:

> *Hypothesis 1b:* Within individuals, day-specific cyber incivility will be positively associated with day-specific physical distress on the job.

Lagged Relationships Between Daily Cyber Incivility and Distress the Following Morning

This study further proposes time-lagged relationships between cyber incivility and distress the next morning. Work stress research has shown that daily work stressors are associated with on-the-job distress that can spill over into the home domain (e.g., Ilies, Dimotakis, & De Pater, 2010; Ilies, Schwind, Wagner, Johnson, DeRue, & Ilgen, 2007). Furthermore, a recent diary study found that day-specific affective distress at work spills over to the following morning, suggesting that experienced distress at work can persist through the next morning (Sonnentag & Binnewies, 2013). In addition, a few incivility studies hint at similar spillover effects. For example, incivility from superiors was positively related to work-to-family conflict in a sample of employees in various organizations (S. Lim & Lee, 2011).

Ferguson (2012) found that spouses of "incivility targets" reported that the targets brought their work stress home. Finally, M. Wang, Liu, Liao, Gong, Kammeyer-Muller, and Shi (2013) reported that on days when employees received greater uncivil treatment from customers, they ruminated more about the negative events in the evening, leading to affective distress the following morning. This line of research suggests that distress resulting from cyber incivility may extend to the home domain after work as well as into the next morning.

On the basis of the affective spillover model (Judge & Ilies, 2004; Williams & Alliger, 1994) and perseverative cognition model of stress (Brosschot et al., 2006; Brosschot et al., 2007), we expect that on days when employees experience greater cyber incivility, their experienced affective and physical distress at work will persist through the next morning because their worry and rumination in the evening prolong physiological activation that interferes with the recuperation process at home. For example, victims of cyber incivility may replay the uncivil incident in their mind thereby prolonging affective, mental, and physical activation. Cyber incivility also could be reviewed and reinterpreted as e-mail correspondence is recorded (cf. Friedman & Currall, 2003). In addition, victims of incivility often engage in sensemaking attempts because of the ambiguous intent of incivility (S. Lim et al., 2008); as such, they may continue the attempts beyond work hours to resolve the ambiguity. In other words, the incivility targets may ruminate about cyber incivility events during the evening, disrupting their sleep and recovery from the day's distress. As a result, their experienced distress persists the following morning. Thus, we hypothesize the following:

> *Hypothesis 2:* Within individuals, day-specific distress on the job (Day *t*) will be positively associated with distress the following morning (Day *t+1*) as indicated by (a) affective distress and (b) physical distress.
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> *Hypothesis 3:* Within individuals, day-specific (a) affective distress and (b) physical distress (Day *t*) will *mediate* the relationships between day-specific cyber incivility (Day *t*) and the respective distress the following morning (Day *t+1*).

Resource-Based Moderators at Work and Home

Job control as a resource in the work domain. Job control refers to the degree of freedom and autonomy an employee has over his or her tasks and conduct at work (Karasek, 1979). JD-R conceptualizes job control as an important job-related resource that not only may reduce employee distress and increase well-being directly but also may alleviate the impact of work demands and stressors on employee strain (Bakker & Demerouti, 2007). Because of the scarcity of research on the potential effects of cyber incivility on employee outcomes, we believe it is important to examine the role of job control in the relationships between cyber incivility and distress. In addition, as employees may have little control over exposure to cyber incivility (because they are not allowed to ignore work e-mail), job control may be an important resource that can help employees manage the experience and impact of cyber incivility. Therefore, this study examines job control as a potentially valuable resource that moderates the cyber incivility–distress relationship at work. While cyber incivility may fluctuate from day to day, job control is a relatively stable job characteristic that varies between individuals depending on their occupational and organizational situations (Karasek). Thus, we examine job control as a cross-level moderator in the relationships between day-specific

cyber incivility and distress assessed at the end of workdays (Day *t*). Specifically, in the context of cyber incivility, when employees are allowed to have control over what happens on the job and to make their own decisions, they may be empowered to shape their work and their environment in a way that alleviates stressors as well as strain reactions at work (Bakker & Demerouti). In addition, job control may alter the perceptions or appraisals of stressors and enable employees to use different strategies to deal with cyber incivility (cf. Kahn & Byosserie, 1992). For example, compared to employees with lower job control, those with higher job control may appraise uncivil e-mail as less threatening to their well-being as they have a wider range of actions to take as a response to the incident or instigator. Employees with high job control may also minimize the damaging effects of cyber incivility as they can reorganize and delegate their tasks or take breaks as needed to recover from stressors while at work. In essence, we hypothesize that job control operates as a useful resource at work that attenuates the concurrent within-person relationships between cyber incivility and distress at work.

> *Hypothesis 4:* Job control will cross-moderate the positive within-individual relationships between cyber incivility and distress on the job as indicated by (a) affective distress and (b) physical distress, such that employees with higher job control will show weaker relationships between cyber incivility and distress, compared to those with lower job control.

Psychological detachment from work as a resource in the home domain. Psychological detachment from work during off-work time (hereafter *detachment*) is defined as an "individual's sense of being away from the work situation" (Etzion, Eden, & Lapidot, 1998: 579). Detachment is often described as "switching off mentally" by refraining from work-related thoughts and activities during nonwork time (Sonnentag & Bayer, 2005). In contrast to job control as a stable job condition, the experience of detachment can fluctuate from day to day depending on employees' engagement in various leisure activities (social, physical, or low effort) during the evening (ten Brummelhuis & Bakker, 2012).

Drawing on COR theory, past research suggests that detachment is necessary for employees to replenish resources depleted at work, thereby increasing well-being and decreasing negative activation (see Sonnentag, 2012, for a review). Research so far has primarily examined detachment as a moderator in the stressor-strain relationship (Sonnentag & Fritz, 2015). Expanding on these findings, a recent study found that detachment in the evening moderates the daily relationships between affective distress at work and affective distress the next morning (Sonnentag & Binnewies, 2013). In other words, ensuring detachment in the evening may be critical to reducing distress spillover from one workday to the next. Given the ERM's proposition that individuals' functional systems (e.g., cognitive, emotional, physiological) recuperate when no longer called upon (Meijman & Mulder, 1998), detachment can alleviate persistent distress by preventing further resource loss from prolonged negative activation in the evening.

In summary, we propose that detachment during evening hours will weaken the relationships between distress at work (Day *t*: resulting from experienced incivility that particular day) and distress the following morning (Day *t+1*). For example, when an employee mentally disengages from work in the evening by participating in off-job activities, the negative events (cyber incivility) are less present mentally, thereby creating a break in spillover of day-specific distress from one day to the next day. Conversely, if an employee is still mentally connected to work-related issues and concerns in the evening (low detachment), the

day-specific distress remains active, further extending already experienced distress. Thus, we hypothesize the following:

> *Hypothesis 5:* Within individuals, day-specific psychological detachment from work during the evening will moderate the positive relationships between distress on the job and distress the following morning as indicated by (a) affective distress and (b) physical distress, such that there will be weaker distress spillover on days when employees experience higher detachment, compared to the days when they have lower detachment.

Method

Participants and Procedure

A total of 155 full-time employees who used e-mail as one of their primary work-related communication media and had regular work hours (no shift work) were recruited via e-mail from a midwestern university's alumni as well as a peer nomination procedure similar to that employed by Martins, Eddleston, and Veiga (2002). Specifically, graduate students in psychology at the midwestern university were asked to send an e-mail invitation to individuals they knew who fit our sampling criteria. The invitation e-mail included information about the study procedure, voluntary participation and confidentiality, and compensation in the form of a $50 electronic gift card for their participation. Out of 155 individuals who signed up for the study, 143[1] completed an initial online survey providing their demographic and job information (92% response rate). In the initial survey, all participants were asked to create their own ID code so that their responses in the initial survey could be matched with their responses to the daily surveys. At the end of the initial survey, participants were directed to a separate Web page in order to enter their preferred e-mail address to which they would receive the daily online surveys.

For those 143 employees who completed the initial survey, we used interval-contingent experience-sampling methodology (cf. Wheeler & Reis, 1991) through which participants reported their experiences at a predetermined interval at work. About 2 weeks after the initial survey, participants were prompted by two e-mails per day and completed two short online surveys for 5 consecutive workdays: one in the morning upon arrival at work (between 7:00 a.m. and 10:00 a.m. for about 5 min) measuring morning distress and detachment during the previous evening and another in the afternoon before leaving work (between 4:00 p.m. and 7:00 p.m. for about 10–12 min) measuring day-specific cyber incivility and day-specific affective and physical distress (see Table 1 for a description of measurement occasions).

Out of 143 participants, 125 completed daily surveys (87% response rate). We restructured the data to examine lagged relationships: daily cyber incivility and distress (Days 1–4, Monday through Thursday) and the following morning distress (Days 2–5, Tuesday through Friday). As a result of cases with missing responses in between days, the final sample was 96 individuals[2] with 363 matched daily observations. Slightly over half of the participants (52%) were female, and the majority were Caucasian (89%); participants were on average 44.10 years old (*SD* = 12.28) with a mean tenure in their current job of 11.30 years (*SD* = 9.80), working a mean of 44.60 hr per week (*SD* = 6.74). Respondents worked in a wide range of professions and industries, including managerial, technical, and administrative positions in manufacturing, financial service, health care, and information/technology to name a few.

Table 1
Summary of Assessments

Variables	Frequency	Time of Assessment
Between-person level		
Age, sex (control variables)	Once	2 weeks before daily surveys
Job control		
Within-person level		
Work demand (control variable)	4 days	Before leaving work at the end of the workday
Cyber incivility		(Monday through Thursday between 4 p.m.
Affective distress		and 7 p.m.)
Physical distress		
Psychological detachment from work during the evening	4 days	The following morning by recalling the previous night (Tuesday through Friday between 7 a.m. and 10 a.m.)
Morning physical distress	4 days	The following morning (Tuesday through
Morning affective distress		Friday between 7 a.m. and 10 a.m.)

This suggests that our sample represents fairly heterogeneous jobs and industries. All respondents reported that they had regular daily interactions with at least one of the following people for their work: supervisor, subordinates, coworkers, customers/clients, or vendors/suppliers.

Initial Assessment

Job control. We measured job control using three items from the job decision latitude scale (Karasek, 1979) using a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Sample items included, "My job allows me to make a lot of decisions on my own" and "I have the freedom to decide how to organize my work." Coefficient alpha was .75.

Daily Afternoon Survey

Cyber incivility.   We used the 14-item Cyber Incivility Scale (V. K. G. Lim & Teo, 2009) to assess daily experiences of cyber incivility. Participants responded using a yes or no format to indicate whether they experienced each of the 14 incidences that day. In the instructions, we pointed out that the items described workplace incidences that occur through *work e-mail*; in addition, each item contained the term "e-mail." We created the index of daily cyber incivility by summing the number of cyber incivility occurrences endorsed on a particular workday. Higher scores indicated a greater frequency of cyber incivility experienced that day. Sample items included, "Today, someone at work said something hurtful to me through e-mail," and "Today, someone at work sent me e-mails using a rude and discourteous tone." Because of the nature of yes/no responses, Cronbach's alpha was not calculated.

Affective distress. The negative emotions from the Job-Related Affective Well-Being Scale (Van Katwyk et al., 2000) were used to assess daily affective distress on the job. The scale was administered at the end of the workdays before the participants left the workplace for home. Participants were presented with a list of 14 adjective descriptors of affect.

Participants answered by indicating how much they felt each of the emotions on a 4-point rating scale (–1 = *definitely not feeling/haven't felt*, 1 = *feeling/have felt slightly*, 2 = *definitely feeling/have felt*, and 0 = *cannot decide*). After we summed the scores, higher scores were indicative of greater affective distress. Sample adjective descriptors were "annoyed," "frustrated," and "depressed." Across observations, the average coefficient alpha was .85 for afternoon affect.

Physical distress. The Physical Symptoms Inventory (Spector & Jex, 1998) was used to measure daily physical distress; we removed 4 of the 18 symptoms that seemed less suitable for the daily diary design (i.e., trouble sleeping, an infection, fever, a skin rash). Participants indicated whether they felt each of the symptoms at work by using a yes or no format (afternoon symptoms). We summed the symptoms so that higher scores indicated greater levels of physical distress. Sample symptoms included "an upset stomach," "headache," and "tiredness or fatigue." As this is a causal indicator scale, Cronbach's alpha is not appropriate (Spector & Jex).

Daily Morning Survey

Affective and physical distress. The same distress scales and rating formats from the afternoon survey were administered in each morning survey upon participants' arrival at work. The scale instructions referred to distress in the morning. Across observations, the average coefficient alpha was .85 for morning affect.

Psychological detachment from work in the evening. Psychological detachment was measured in the morning survey with a four-item scale from Sonnentag and Fritz (2007). Participants were instructed to answer on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) by recalling the extent to which they detached mentally from work during the previous evening. Example items included, "I didn't think about work at all" and "I forgot about my work." Across observations, the average coefficient alpha was .91.

Control Variables

In our analyses, we controlled for sex (male = 1, female = 0) and age as they may be associated with individuals' day-level distress (Volmer et al., 2012). As daily work demands[3] were found to be related to daily distress (Ilies et al., 2010), we also controlled for it to rule out the possibility that work demands might be the driving factor in distress as opposed to cyber incivility. This was measured in the afternoon survey with the five-item Quantitative Work Load Inventory by Spector and Jex (1998), which we adapted to use in our day-level design (1= *very little* to 5 = *extremely a lot*). A sample item included, "Today, to what extent did you have to do more work than usual?" Across observations, the average coefficient alpha was .89.

Analyses

Because of the hierarchical structure of the data, with days (Level 1) nested within individuals (Level 2), we used hierarchical linear modeling (HLM 7; Bryk & Raudenbush, 1992)

to test our hypotheses. In all of the models, Level 1 predictors (e.g., cyber incivility) were centered around each individual's mean score to remove any possible between-individual effects as recommended by Ohly, Sonnentag, Niessen, and Zapf (2010). Level 2 variables (i.e., age, job control) were centered around the grand mean.

Results

Preliminary Analysis

Descriptive statistics and correlations for all study variables can be found in Table 2. Of the participants, 64% reported receiving less than one uncivil e-mail per workday on average, while 34% reported receiving one to three rude e-mails per workday. About 2% of the participants reported receiving more than five uncivil e-mails on average. The maximum number of uncivil e-mails reported was seven in a given workday, and the minimum number of rude e-mails reported was zero. Bivariate correlations were all in the expected directions, providing preliminary support for Hypotheses 1, 2, and 3. At the daily level, cyber incivility was positively related to end-of-workday affective ($r = .48$, $p < .01$) and physical ($r = .38$, $p < .01$) distress as well as morning affective ($r = .23$, $p < .01$) and physical ($r = .28$, $p < .01$) distress. End-of-workday distress was also positively related to morning distress ($r = .25$ for affective distress, $r = .43$ for physical distress, both at $p < .01$).

Before testing our hypotheses, we also tested null models (i.e., intercept-only models) to examine whether affective and physical distress varied within individuals. The results showed that significant amounts of variance were explained by within-individual fluctuations in end-of-workday affective distress (47%) and morning distress (77%). Similarly, 44% of the variance in end-of-workday physical distress and 49% of the variance in morning physical distress were attributed to within-individual variations. Therefore, it was appropriate to use a multilevel approach to test our hypotheses.

Testing Main Effects and Mediation Effects

Table 3 displays the results for Hypothesis 1 on the concurrent relationships between cyber incivility and end-of-workday distress. Hypotheses 1a and 1b were both supported in that cyber incivility was positively related to affective ($\gamma = 0.56$, $p < .001$) and physical ($\gamma = 0.21$, $p < .01$) distress on the job. Table 4 shows the results for Hypothesis 2 on the lagged relationships between distress on the job (Day t) and distress the following morning (Day $t+1$). Hypotheses 2a and 2b were also supported in that affective ($\gamma = 0.33$, $p < .001$) and physical ($\gamma = 0.35$, $p < .001$) distress on the job on Day t were positively related to their respective distress level the following morning (Day $t+1$).

Next, we followed Bauer, Preacher, and Gil's (2006) suggestions for using a Monte Carlo approach[4] to multilevel mediation to examine the indirect lagged effects of incivility (x) on distress the next morning (y) through distress the previous workday (m). This method uses parameter estimates (a for $x \rightarrow y$, b for $m \rightarrow y$) and their respective standard errors to simulate random draws from the a and b distributions and to calculate the product of these values ($a \times b$). A confidence interval (CI) around the observed value of $a \times b$ is estimated through repeating the aforementioned procedure thousands of times. We used this method on the basis of the suggestions by Bauer et al. and its successful use in Level 1-1-1 mediation tests in

Table 2

Means, Standard Deviations, and Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	M	SD[a]	SD[b]
Between-person													
1. Age											44.10	—	12.28
2. Sex[c]	–07										—	—	—
3. Job control	.25*	.02									4.07	—	0.61
Within-person													
4. Daily work demands	.06	–.02	.08		.12*	.26**	.15**	–.03	–.01	.03	3.44	1.06	1.01
5. Daily cyber incivility	–.06	.01	–.03	.31**		.48**	.38**	–.07	.23**	.28**	0.78	1.25	0.89
6. Afternoon affective distress[d] (t)	–.06	–.08	–.22*	.23*	.62**		.49**	–.01	.25**	.35**	2.47	2.80	2.19
7. Afternoon physical distress (t)	–.26*	–.12	–.30**	.19	.50**	.61**		–.05	.15**	.43**	1.29	1.50	1.24
8. Evening detachment (t)	.09	.05	–.10	–.00	–.11	–.10	–.11		–.13*	–.17**	3.24	1.12	0.87
9. Morning affective distress (t+1)	.02	–.04	–.00	.11	.35**	.45**	.31**	–.10		.33**	1.47	2.58	1.66
10. Morning physical distress (t+1)	–.29**	–.09	–.16	.06	.43**	.53**	.66**	–.24*	.43**		0.79	1.15	0.90

Note: Between-person correlations are below the diagonal ($N = 96$). Within-person variables were averaged across days to calculate the between-person correlations. Within-person correlations are above the diagonal ($N = 363$).

[a]Standard deviations at the day level.
[b]Standard deviations at the person level.
[c]Male = 1, female = 0.
[d]Actual maximum score was 14.
*$p < .05$.
**$p < .01$.

Table 3

Main Effects of Daily Cyber Incivility and Moderating Effects of Job Control on Distress at Work

Variables	Affective Distress		Physical Distress	
	Coefficients (SE)	t	Coefficients (SE)	t
Intercept (γ_{00})	2.78 (0.37)	7.58***	1.50 (0.20)	7.52***
Age (γ_{01})	–0.00 (0.02)	–0.14	–0.01 (0.01)	–1.47
Sex (γ_{02})	–0.48 (0.47)	–1.02	–0.34 (0.25)	–1.37
Daily work demands (γ_{10})	0.49 (0.16)	3.00**	0.10 (0.11)	0.98
Daily cyber incivility (γ_{20})	0.56 (0.16)	3.62***	0.21 (0.07)	2.94**
Job control (γ_{03})	–0.92 (0.43)	–2.14*	–0.50 (0.21)	–2.29*
Cyber Incivility × Job Control (γ_{23})	–0.52 (0.27)	–2.96**	–0.21 (0.08)	–2.51*
Level 1 residual variance	3.42		1.02	
Level 2 residual variance	4.57		1.24	

Note: Level 1 (*N* = 363), Level 2 (*N* = 96).
*p < .05.
**p < .01.
***p < .001.

Table 4

Main Effects of Daily Distress and Moderating Effects of Evening Detachment on Distress in the Following Morning

| Variables	Morning Affective Distress		Morning Physical Distress	
	Coefficients (SE)	t	Coefficients (SE)	t
Intercept (γ_{00})	1.33 (0.52)	2.56*	0.45 (0.28)	2.69**
Age (γ_{01})	0.01 (0.01)	0.48	–0.02 (0.01)	–2.84**
Sex (γ_{02})	–0.07 (0.31)	–0.22	–0.10 (0.15)	–0.67
Daily work demands (γ_{10})	0.04 (0.21)	0.20	0.01 (0.06)	0.09
Daily distress (γ_{20})	0.33 (0.08)	3.93***	0.35 (0.09)	3.72***
Evening detachment (γ_{30})	–0.18 (0.10)	–1.74	–0.08 (0.05)	–1.47
Daily Distress × Evening Detachment (γ_{40})	–0.07 (0.03)	–2.56*	–0.07 (0.02)	–3.84***
Level 1 residual variance	5.33		0.77	
Level 2 residual variance	0.96		0.33	

Note: Level 1 (*N* = 363), Level 2 (*N* = 96).
*p < .05.
**p < .01.
***p < .001.

previous studies (e.g., ten Brummelhuis & Bakker, 2012; M. Wang et al., 2013). With regard to *affective distress as a mediator*, results revealed that daily cyber incivility (95% CI = [0.01, 0.19]) was positively related to affective distress the following morning through affective distress the previous workday, supporting Hypothesis 3a. Regarding *physical distress as*

Figure 2
Interaction Between Job Control and Daily Cyber Incivility Predicting Distress
**at the End of the Workday**
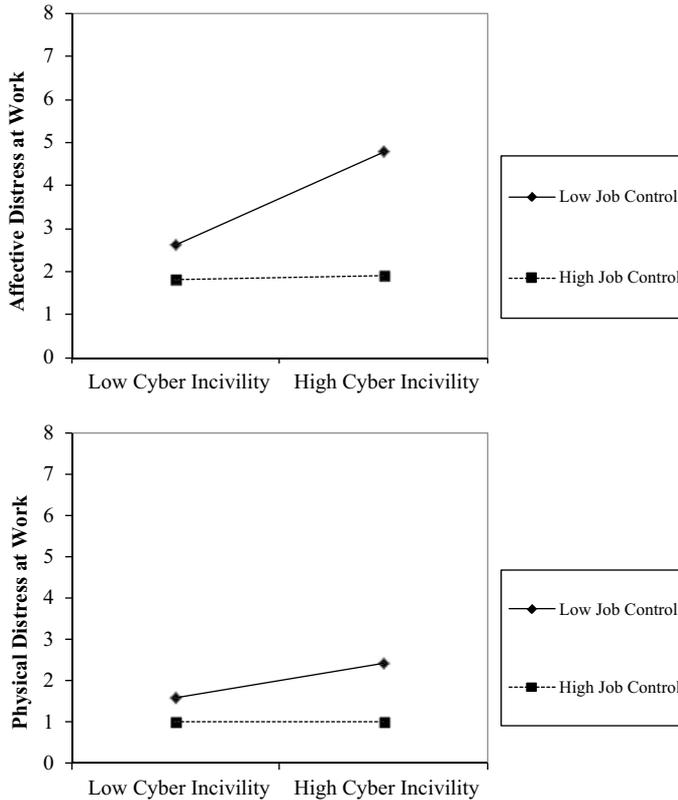
a mediator, cyber incivility (95% CI = [0.01, 0.09]) was positively related to physical distress the next morning through physical distress the previous workday; thus, Hypothesis 3b was supported.

Testing Moderation Effects

Hypothesis 4 stated that job control would moderate the concurrent relationships between daily cyber incivility and distress on the job. In Table 3, results indicate that job control cross-moderated the within-person relationships between cyber incivility and affective distress ($\gamma = -0.52$, $p < .01$) and between cyber incivility and physical distress ($\gamma = -0.21$, $p < .05$). Following Preacher, Curran, and Bauer's (2006) approach, simple slopes tests in multilevel modeling were conducted to further examine the nature of the interactions. As Figure 2 shows, when job control was high (1 *SD*), daily cyber incivility was not related to affective distress (0.08, *SE* = 0.21, *t* = 0.39, n.s.) or physical distress (0.04, *SE* = 0.10, *t* = 0.40, n.s.) on the job. However, when job control was low (–1 *SD*), daily cyber incivility was significantly

Figure 3
Interaction Between End-of-Workday Distress and Evening Psychological
Detachment Predicting Distress the Following Morning
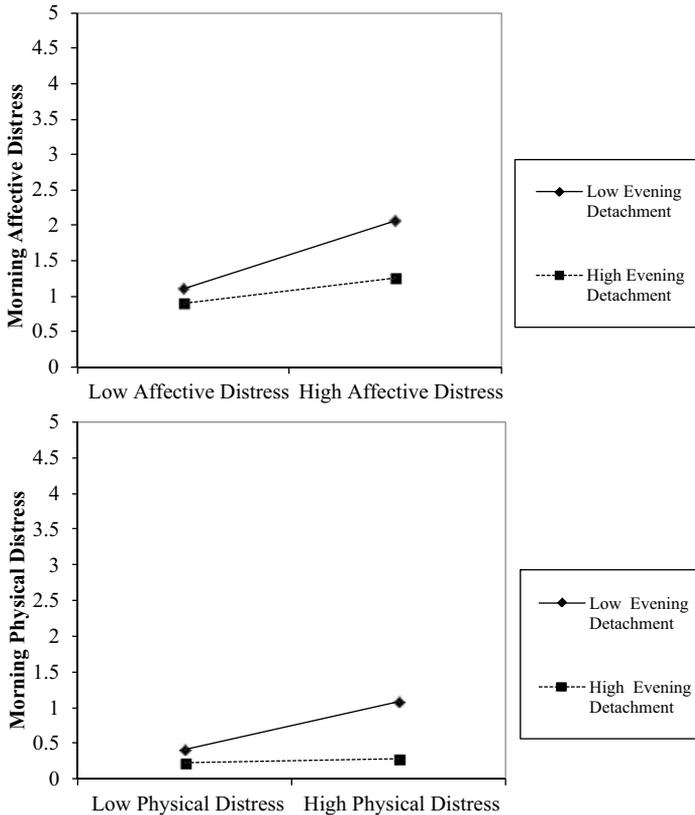
related to affective distress (0.45, *SE* = 0.12, *t* = 3.61, *p* < .001) and physical distress (0.23, *SE* = 0.07, *t* = 3.34, *p* < .001) on the job. Therefore, Hypotheses 4a and 4b were supported, respectively.

Hypothesis 5 proposed that the lagged effects of distress (Day *t*) on morning distress (Day *t+1*) would be moderated by detachment in the evening (Day *t* evening). In Table 4, results show that detachment moderated the within-person relationship between affective distress on Day *t* and the following morning on Day *t+1* (γ = –0.07, *p* < .05) as well as the relationship between physical distress on Day *t* and the following morning on Day *t+1* (γ = –0.07, *p* < .001). As shown in Figure 3, on days with high levels of detachment (1 *SD*), both affective distress (0.12, *SE* = 0.08, *t* = 1.40, n.s.) and physical distress (0.05, *SE* = 0.08, *t* = 0.67, n.s.) on Day *t* were not related to their respective distress the following morning on Day *t+1*. However, on days with low levels of detachment (–1 *SD*), affective distress (0.20, *SE* = 0.07, *t* = 2.57, *p* < .05) and physical distress (0.21, *SE* = 0.07, *t* = 2.95, *p* < .01) on Day *t* were positively related to their respective distress level the following morning (Day *t+1*). Thus, Hypotheses 5a and 5b were supported, respectively.

Discussion

Summary of Findings

Given the prevalent use of e-mail for work among contemporary employees, this study investigated whether day-specific cyber incivility is associated with distress at work and whether the initial distress persists until the next morning. Our findings showed that day-level cyber incivility not only was associated with greater distress on the same workday (Day t) but also was related to higher distress the following morning (Day $t+1$) via distress on the initial workday (Day t). Furthermore, we found support for two moderators of these relationships: job control at work and day-level evening detachment at home. Specifically, our results indicated no significant within-person relationships between cyber incivility and distress at work for employees with high job control and positive relationships for employees with low job control. In addition, on days with greater evening detachment, employees were less likely to experience the distress spillover from one workday to the following morning, whereas employees were more likely to experience the spillover on days with lower evening detachment.

Contributions

While past research has focused predominantly on face-to-face incivility, this study examined *cyber incivility* as an emerging stressor in the workplace. In line with COR theory, our findings suggest that cyber incivility seems to place additional demands on employees' depleting emotional and physical resources and thereby contributes to distress at the end of the workday. While research had been unclear about the link between cyber incivility and physical distress (Giumetti et al., 2013), the diary method in this study captured naturally occurring variations in cyber incivility and physical distress. Thus, our results provide empirical support for the conceptualization of cyber incivility as a daily work stressor. In sum, given that e-mail interactions are often subject to the risk of miscommunication and misinterpretation that may even escalate into interpersonal conflict at work (Byron, 2008), our findings are highly relevant for employees who use e-mail for work communications. Thus, this is a timely investigation that draws more scholarly attention to cyber incivility in organizations.

Second, following George and Jones's (2000) advice, we introduced a time lag between cyber incivility and distress to assess the duration of, and the underlying mechanism of, cyber incivility. The results showed that cyber incivility on the job had a lagged relationship with distress the following morning via distress spillover, providing support for both the affective spillover model (Judge & Ilies, 2004; Williams & Alliger, 1994) and the perseverative cognition model of stress (Brosschot et al., 2006; Brosschot et al., 2007). In other words, employees may start the following workday at a greater disadvantage because of distress spillover originating from the previous day's cyber incivility. Therefore, this study sheds light on the temporal context of the stress process involving cyber incivility. While our study focuses on *short-term* relationships between cyber incivility and distress, the current results can be viewed as "early warning signs" for the potential development of more serious chronic strain (e.g., burnout, depression, migraines).

Third, this study contributes to both the incivility and work stress literature by examining two resources at different levels in the model. Specifically, we found that job control, a stable job characteristic at the individual level, reduced the within-person relationships between

cyber incivility and both affective and physical distress. Ilies et al. (2010) suggested that the stress-alleviating effects of job control may have been previously masked by the use of between-subject designs. In line with this notion, results by Ilies et al. showed that job control moderated the within-person relationship between daily work demands and distress on the job. Even after we controlled for daily work demands, our study provided empirical support for the stress-buffering role of job control. Therefore, the current cross-moderation effect is fairly robust, confirming the JD-R notion that job control is a highly valued resource at work that reduces the stressor-strain link (Bakker & Demerouti, 2007; Karasek, 1979), especially in the context of cyber incivility.

Furthermore, we found that evening detachment at the day level attenuated the spillover of distress from one day to the next (both affective and physical). This finding is congruent with ERM (Meijman & Mulder, 1998) in that detachment provides employees with opportunities for recuperation from the day's demands. While this moderating effect of detachment is in line with the findings by Sonnentag and Binnewies (2013), our study connects those findings to the experience of cyber incivility. Given that e-mail interactions are recorded (Friedman & Currall, 2003), cyber incivility could be "reexperienced" by victims, making them more likely to ruminate about the incident in the evening. However, our findings suggest that mental disengagement from work-related thoughts in the evening is crucial to relieve incivility-related distress for the next workday. Although speculative, this may even indicate that a potential resource-loss spiral may be prevented *on a daily basis* by ensuring detachment in the evening (cf. Hobfoll, 1989). In sum, our findings highlight relevant resources in the work and home domain, pointing to protective mechanisms against distress from cyber incivility. Thus, this study provides researchers and practitioners with guidance as to how to prevent this short-term stress process from turning into a chronic problem that may impede employee health and job performance.

Limitations

As with any study, our findings should be interpreted in light of the limitations. One limitation is the sole reliance on self-reports, which may increase common method variance (CMV) concerns (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Although Podsakoff et al. suggested that CMV is less problematic when variables are measured at different time points, future efforts in reducing CMV concerns may include using more objective indicators of daily distress, such as cortisol levels, blood pressure, or amount of pain killer intake (e.g., Ilies et al., 2010; Saxbe, Repetti, & Nishina, 2008). Second, despite the repeated assessments over several workdays, causal inferences for the concurrent relationship between incivility and distress is limited as both variables were measured at the same time. However, we controlled for daily work demands to rule out the possibility that it is the underlying mechanism for the proposed relationships. In addition, while retrospective bias might have influenced our results, Wheeler and Reis (1991) suggested that this possible bias depends on the nature of the phenomenon being rated. In our study, cyber incivility and physical symptoms were fairly discrete phenomena and, therefore, less susceptible to retrospection bias.

Another limitation refers to the assessment of psychological detachment. Psychological detachment during evening hours was assessed the following morning, although it might be better to measure it at bedtime. However, asking participants to fill in an "online" survey

using smartphones or computers would have interfered with their detachment experience in the evening because they may use the same technological device and e-mail account as they do for work. Another possible limitation is that we measured cyber incivility using simple yes/no response options in the context of 1 workday. We decided to use this simpler response option to reduce burden on our participants, considering that they had to fill out two daily surveys for 5 workdays. Despite the limited response options and the short time frame (i.e., 1 workweek), the data indicated variability in cyber incivility at the day level with enough statistical power to find support for our hypotheses. Nevertheless, future research should consider using the original Likert-scale response options as well as extending measurement occasions. Lastly, the results are based on a sample of mostly Caucasian employees with a college degree, possibly limiting the generalizability of our findings. However, the findings are based on participants from a variety of industries and organizations and, therefore, point to the importance of examining cyber incivility across many occupations.

Future Research Directions

Given that our study examined affective and physical distress, future research may focus on other behavioral outcomes of cyber incivility. For example, Porath and Erez (2007) called for more research regarding relationships between incivility and job performance–related outcomes. The Giumetti et al. (2013) experimental study provided preliminary support for the assumption that cyber incivility may hinder task performance. While we utilized resource-based theories as a framework for our research questions, future research may draw on the stressor-emotion model of work behaviors[5] (Spector & Fox, 2005) to explore relationships between incivility and performance-related behaviors (e.g., expending reduced effort into work tasks).

In addition, future studies should identify additional factors (e.g., workgroup norms, coping) that may alleviate or aggravate the relationship between cyber incivility and employee distress. For example, employees working in a department in which positive relationships are valued may be less affected by cyber incivility, compared to those working in an environment that mainly focuses on competition and efficiency (cf. Hammer, Saksvik, Nytro, Torvatn, & Bayazit, 2004). Furthermore, some strategies to cope with experienced cyber incivility may be more helpful in reducing distress than others (e.g., trying to ignore it; cf. Cortina & Magley, 2009).

Some studies have found that daily work stressors can affect one's behaviors and interpersonal interactions outside of work (e.g., Ilies et al., 2007; S-W. Wang, Repetti, & Campos, 2011). Information/communication technologies (e.g., smartphones) make it harder for employees to mentally switch off from work during nonwork time (Park, Fritz, & Jex, 2011). This may increase the likelihood of cyber incivility spilling over into employees' personal lives and even crossing over to other family members (cf. Ferguson, 2012; S. Lim & Lee, 2011). Therefore, it is crucial to investigate relationships between employees' experiences of cyber incivility and their outcomes both in the work and nonwork domain.

Future research may investigate the differential features and mechanisms related to face-to-face versus cyber incivility. For instance, employees could try to avoid or minimize interactions with uncivil people in face-to-face interactions to compensate for an inability to block e-mails from the people at work. Thus, it would also be fruitful to examine potential

incivility-specific coping strategies (Cortina & Magley, 2009) and their relationships with employee outcomes. Additionally, future research may explore different sources of incivility in tandem with cyber and face-to-face incivility, as there may be different power dynamics in employees' relationships with their supervisor, coworkers, or customers/clients, as well as different attribution processes in incivility experiences (see Hershcovis & Barling, 2010, for a review).

Practical Implications

Our findings are also relevant for managerial practice. Given the low intensity of the interpersonal stressor (compared to, e.g., overt physical aggression) as well as its ambiguity, cyber incivility may often be dismissed in organizations as not relevant. For example, one of the study participants added to the survey responses: "It is ambiguous as I write this as to whether the ignorance was willful or an innocent and unmeaning pause in communication flow." Despite the ostensibly ambiguous nature, our results suggest that the distressing effects of cyber incivility are persistent and strong. Therefore, it is imperative for organizations to be aware of the detrimental effects of cyber incivility on employee distress. Byron (2008) suggested that it would be helpful to make employees aware of possible misperceptions/biases in e-mail communication. Accordingly, organizations may design interventions to reduce cyber incivility in the first place by increasing employee awareness regarding online communication and cyber incivility. The CREW training (civility, respect, and engagement at work) has been shown to decrease face-to-face incivility and job burnout among employees (Leiter, Laschinger, Day, & Oore, 2011). Such training could further incorporate policies regarding e-mail communication to address cyber incivility at work. In particular, managers of virtual teams and teleworkers should pay attention to potential issues around cyber incivility. Specifically, because of the fact that the majority of work communication is done via e-mail and that group members may not know each other very well (Golden & Raghuram, 2010; Martins, Gilson, & Maynard, 2004), the ambiguity in e-mails with regard to the intentions of the e-mail sender may be increased. Therefore, a proactive establishment of norms for electronic communication can help limit potential disadvantages of cyber incivility in the workplace.

Along with direct attempts at reducing cyber incivility, our moderator effects suggest that organizations may redesign jobs that are prone to cyber incivility in order to increase job control. Considering the frequent use of smartphones with wireless Internet access that can connect employees to work 24/7, it may be difficult for employees to completely switch off from work (i.e., psychological detachment from work) during evening hours. However, employees and organizations should be aware that especially on days when employees experience cyber incivility, they should ensure psychological detachment from work during evening hours in order to unwind from their stressful workday and reduce distress the following morning.

Conclusion

Many organizations may still view incivility as relatively trivial compared to severe forms of mistreatment that may have legal ramifications (e.g., harassment; Cortina et al., 2001). However, the current study suggests that ostensibly minor mistreatment online is a meaningful stressor that depletes employees' emotional and physical resources for an extended period of

time. Furthermore, this study suggests that the short-term distress originating from cyber incivility can abate rather than accumulate when resources at work (i.e., job control) and home (i.e., psychological detachment from work) are provided. It is our hope that this study will promote future research on the emerging stressor of cyber incivility in the workplace.

Notes

1. We combined both samples as they did not systematically differ on job control (moderator) and demographic variables (i.e., age, organizational tenure, weekly work hours, typical amount of work e-mails). The dummy-coded group membership in the final sample also did not affect the results of our final model.

2. Those that were removed from the final analyses were not significantly different from the final sample regarding demographic characteristics.

3. We thank an anonymous reviewer for this suggestion.

4. The main benefit of using this method over others (e.g., the Sobel test) is that it does not assume normality in the distribution of indirect effect, which is, in fact, not normally distributed. This method assumes that only the parameter estimates are normally distributed. Further interested readers may refer to the following Web site that is publicly available: http://quantpsy.org/medmc/medmc111.htm.

5. We thank an anonymous reviewer for this suggestion.

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