Feeling insulted? Examining end-of-work anger as a mediator in the relationship between daily illegitimate tasks and next-day CWB

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Summary
In this daily diary study, we investigated the within-person relationship between daily illegitimate tasks and next-day counterproductive work behavior (CWB). We explored a moderated mediation model where the link between illegitimate tasks and CWB is mediated by daily end-of-work anger, with daily time pressure moderating the relationship between illegitimate tasks and end-of-work anger. We collected data from 114 full-time employees across 10 consecutive working days. Results showed that within individuals, daily illegitimate tasks positively predicted next-day CWB, and the relationship was mediated by daily end-of-work anger. Further, daily time pressure moderated the relationship between daily illegitimate tasks and daily end-of-work anger with the relationship being stronger when daily time pressure was high.

KEYWORDS
anger, CWB, daily diary, illegitimate tasks, time pressure

1 | INTRODUCTION

Counterproductive work behavior (CWB) is known as "employees' volitional acts that harm or are intended to harm organizations or people in organizations" (CWB; Spector & Fox, 2005, p. 151) and consists of various forms of workplace misbehaviors including sabotage, withdrawal, production deviance, theft, and abuse (Spector, Fox, Penney, et al., 2006). CWB is an important issue in the workplace, costing organizations millions of dollars annually (Camara & Schneider, 1994; Vardi & Weitz, 2004). Given the prevalence and negative consequences of CWB, it is important to understand when and why employees engage in these behaviors. As such, extensive work has been done in this direction (Zhou, Meier, & Spector, 2014). In particular, researchers have examined various workplace stressors as distal predictors of negative emotions that are proximal antecedents of CWB (e.g., Fox, Spector, & Miles, 2001; Sakurai & Jex, 2012; Spector & Fox, 2002; Yang & Diefendorff, 2009). However, much of this past work has examined these linkages using cross-sectional between-person designs (Matta et al., 2014; Spector & Fox, 2005), provoking researchers to call for more within-person studies on predictors of CWB (Yang & Diefendorff, 2009).

The current study examines illegitimate tasks—work tasks that employees feel they “should not have to do” because they are perceived to fall outside of one’s work role (Semmer, Jacobshagen, Meier, & Elfering, 2007)—as a potential daily antecedent of CWB, and extends our knowledge of the underlying process by exploring daily end-of-work anger as a mediator and daily time pressure as a moderator in this relationship. In doing so, the study makes several contributions to the literature. First, previous findings examining work stressors (e.g., interpersonal conflict and organizational constraints) as predictors of CWB (Hershcovis et al., 2007) mainly used cross-sectional between-person designs (Matta et al., 2014; Spector & Fox, 2005) from which conclusions generally indicate that experiences of workplace stressors over a period of time have an accumulated effect on CWB, overlooking the within-person fluctuation of CWB and factors that affect it (Judge, Scott, & Ilies, 2006; Matta et al., 2014). This limitation is critical because CWB tends to vary across time within individuals. For example, Judge et al. (2006) reported that 53.1% of the variance in CWB is within individuals, further indicating the importance of examining the stressor-CWB relationship using within-person designs. Examining the daily fluctuation of employee CWB can aid in uncovering the short-term effects of workplace stressors on CWB and allows for the ability to examine short-term emotional processes explaining these links. However, the literature in this direction is still scarce.

The limited number of previous within-person studies on CWB have found that daily perceived ambiguity, perceived supervisor
interpersonal injustice, perceived customer interpersonal injustice (Yang & Diefendorff, 2009), and employee-reported significant daily work events (Matta et al., 2014) positively predict CWB and may do so through higher general levels of negative emotions. However, studies on additional specific situational antecedents of CWB have been called for (Yang & Diefendorff, 2009), and a finer-grained approach to the underlying emotional process is necessary to tease apart which emotions are predictive of which behaviors. We contribute to this burgeoning literature by examining illegitimate tasks, one newly introduced workplace stressor that has been recently linked with CWB in a between-person design (Semmer, Tschan, Meier, Facchin, & Jacobshagen, 2010), as a predictor of employee daily CWB, and investigate whether it has a short-term effect in predicting the within-person variation of CWB through proximal changes in anger.

Second, the only two daily diary studies that have previously explored stressors as predictors of CWB (Matta et al., 2014; Yang & Diefendorff, 2009) examined the relationship within days only, using daily stressors to predict negative emotions and CWB in the same day. This approach constrains the relationship within workdays, limiting the ability to draw conclusions about the possible direction of the relationship (Yang & Diefendorff, 2009). For example, it is likely that employees who engage in more CWB also tend to experience more negative emotions that day and thus are prone to report experiencing more stressors that day. This study extends these past approaches by examining the lagged effect of daily illegitimate tasks on next-day CWB, separating the time of measurement between IV and DV within person, in an attempt to better demonstrate the direction of the relationship between illegitimate tasks and CWB. This builds upon the only cross-sectional study (Semmer et al., 2010) on the relationship between illegitimate tasks and CWB.

Third, different stressors may function via distinctive emotional reactions to influence employee behaviors (Spector, Fox, & Domagalski, 2006), yet little work has been done to examine discrete emotional processes as they relate to CWB. It is important to note that Yang and Diefendorff (2009) examined general negative emotions by combining reports about a variety of discrete feelings and Matta et al. (2014) similarly measured general negative emotional reactions. Although their work provided evidence supporting the mediating role of negative emotions in general between stressors and CWB, the mediating effect of individual discrete negative emotions was not examined. Knowing the discrete emotional states that precede CWB is important to illuminate methods for prevention and intervention. In the current study, we examined anger; a discrete emotion that has been linked with daily illegitimate tasks (Eatough et al., 2016) and in other work has been found to mediate the effect of stressors (e.g., interpersonal justice) on CWB (Roy, Bastounis, & Minibas-Poussard, 2012), as a potentially important mediator in the relationship between daily illegitimate tasks and next-day CWB.

Fourth, both Yang and Diefendorff (2009) and Matta et al. (2014) examined individual-level variables (e.g., negative affectivity and regulation strategy) as moderators of the stressor–emotion relationship, helping us understand how the relationship between daily stressors and daily emotion might be different from person to person. However, these studies solely focused on individual differences and neglected the fact that the effect of workplace stressors on emotions might also differ from day-to-day depending on contextual or environmental factors. This study extends the literature by examining daily time pressure at work as a fluctuating daily contextual factor and investigates its moderating role on the relationship between daily illegitimate tasks and daily end-of-work anger. We chose time pressure as a particularly relevant daily factor because it reflects the urgency of completing job-related tasks, and it could make the conflict between completing core job tasks and illegitimate tasks more salient, thus having a more profound effect on employee anger.

2 | ILLEGITIMATE TASKS AND CWB

CWB has been studied under various terms such as workplace aggression (Neuman & Baron, 1998), workplace deviance (Robinson & Bennett, 1995), and workplace incivility (Andersson & Pearson, 1999). Although they are connected, Spector and Fox (2005) discussed the differences between CWB and other constructs, concluding that CWB overlaps but is still distinct from each of them. For example, although aggressive behaviors such as retaliation is focused on justice restoration, CWB is not always motivated in that way; although violence is specifically against people, CWB can be people-targeted or less target-specific (e.g., withdrawal). Furthermore, acts of CWB are volitional rather than accidental, indicating employees engage in these behaviors on purpose. In other words, CWB requires an employee to actively make a decision to engage in these purposeful misbehaviors (Bordia, Restubog, & Tang, 2008). For example, "wasting employer’s supplies" (Spector, Fox, Penney, et al., 2006) would be classified as a CWB if the employee consciously attempted to cause harm to his/her employer. However, if the harmful performance was unintended (e.g., an employee was not trained to use the supplies effectively), it would not be considered a CWB because the purpose was not to perform the task incorrectly. In addition, these purposeful behaviors can harm organizations and/or people in organizations (for detailed review on differences between CWB and other similar constructs, see Spector & Fox, 2005). Previous researchers have devoted a great amount of effort to uncovering factors that could predict employee CWB and have found workplace stressors (e.g., role stressors, justice-related stressors, and interpersonal conflict), personality traits (e.g., trait anger, agreeableness, and conscientiousness), and their interactions predicted CWB (e.g., Berry, Ones, & Sackett, 2007; Bowling & Eschleman, 2010; Hershcovis et al., 2007; Zhou et al., 2014). Research on new situational predictors of CWB is still needed (Yang & Diefendorff, 2009), as well as research on additional stressor events preceding such behaviors (such as illegitimate tasks; Semmer et al., 2010) because often stressors are—to some degree—within the scope of control in an organization.

Illegitimate tasks are perceived as unnecessary or unreasonable work assignments that violate what can reasonably be expected of a given employee (Semmer et al., 2007; Semmer et al., 2015). Unreasonable tasks are those that should be done by someone else because they are not in line with employees’ working role. For example, asking a desk clerk to clean a building is unreasonable, although it is perfectly reasonable to assign the same task to a janitor. Unnecessary tasks are those that should have not existed in the first place. For example, asking an office secretary to file outdated materials that are no longer...
useful or having to provide paperwork twice because the recipient lost the materials is unnecessary.

The concept of illegitimate tasks derives from the "Stress-as-Offense-to-Self" (SOS) theory (Semmer et al., 2007) that suggests that individuals try to maintain one's self-worth. The key component of this theory is self-esteem, and it proposes that many events threaten (e.g., lack of appreciation and respect) and boost (e.g., fairness) individuals' personal and social esteem. Illegitimate tasks indicate disrespect to an employee's professional identity and thus serve as a threat to social esteem (Semmer et al., 2007). Such tasks are likely to influence employee well-being and behaviors because they constitute a meaningful workplace stressor (Semmer et al., 2010; Semmer et al., 2015). These tasks also indicate social devaluation (they signal disrespect and devaluation) and are likely to be perceived as unfair (they violate one's role boundary; Semmer et al., 2015).

Illegitimate tasks are closely related to organizational justice in that both are "identity judgments" (Tyler & Blader, 2003) and refer to messages about one's social standing and have implications for social esteem (Cropanzano, Byrne, Bobocel, & Rupp, 2001). Yet illegitimate tasks represent a special and unique construct because justice theories do not focus specifically on task assignments. Instead, justice constructs mainly focus on outcome decisions concerning the allocation of positions, resources, and rewards (Niehoff & Moorman, 1993). For example, distributive injustice concerns the outcomes, procedural injustice focuses on the process of determining the outcomes, and interactional justice is about the quality of interpersonal treatment (Colquitt, Conlon, Wesson, Porter, & Ng, 2003). Thus, when employees receive an illegitimate task assignment, they are likely to perceive the task assignment as unfair, but this task itself is not within the scope of any of the injustice constructs as it is an unfairness inherent in the task. Although justice theory helps explain affective and behavioral reactions to illegitimate tasks, none of the specific injustice constructs alone can capture task assignments that are perceived as "illegitimate" (Semmer et al., 2015). Thus, illegitimate tasks are considered a distinct form of unfairness, called task-based unfairness (Semmer et al., 2010). Empirical evidence supports this conceptualization. For example, Semmer et al. (2010) found that illegitimate tasks predicted employee CWB above and beyond organizational justice, and Semmer et al. (2015) demonstrated the ability for illegitimate tasks to predict variance in employee strain (self-esteem, feelings of resentment towards one's organization, and burnout) above and beyond procedural, distributive, and interactional injustice, confirming the unique contribution of illegitimate tasks to employee well-being and behavior beyond the effects of conventional justice constructs.

Illegitimate tasks are considered to be a workplace stressor that has negative effects on employee self-esteem, emotions, well-being, sleep quality, and behaviors (Eatough et al., 2016; Pereira, Semmer, & Elfering, 2014; Semmer et al., 2010; Semmer et al., 2015). Among the previous work, only one study examined the effect of illegitimate tasks on CWB and found that illegitimate tasks positively related to CWB after controlling for conscientiousness, agreeableness, and organizational justice (Semmer et al., 2010). However, this study used a cross-sectional between-person design; thus, it remains unclear whether the same observed between-person findings of the accumulated effect of illegitimate tasks on CWB are applicable within persons. Unless we apply a within-person lens, we won't know whether individuals' experience of illegitimate tasks is related to daily fluctuation of their deviant behaviors. As such, below, we argue that daily illegitimate tasks will positively predict CWB within individuals.

First, illegitimate tasks are threats to employees' social esteem, indicating disrespect to the person who receives this kind of task assignment (Semmer et al., 2007). In other words, illegitimate tasks threaten social well-being. Indeed, although only having been introduced as a workplace stressor in recent years (Björk, Bejerot, Jacobshagen, & Härenstam, 2013; Semmer et al., 2010), illegitimate tasks have been consistently found to relate to various negative emotional and behavioral outcomes in empirical investigations (e.g., Eatough et al., 2016; Semmer et al., 2010). Although it has been established that illegitimate tasks indeed elicit negative emotions such as anger (Eatough et al., 2016), we now attempt to examine more distal affective-driven outcomes of this process, examining illegitimate tasks' link to behaviors (e.g., CWB) via increased anger.

Second, in the limited number of studies that have previously been conducted on illegitimate tasks using a within-person design, researchers have found that daily illegitimate tasks negatively relate to daily cortisol release, sleep quality, state self-esteem, job satisfaction, and psychological detachment and positively relate to anger and depressive mood (Eatough et al., 2016; Kottwitz et al., 2013; Pereira et al., 2014; Sonnentag & Lischetzke, 2017). These findings suggest that daily experience of illegitimate tasks has a negative effect on the fluctuation of day-to-day levels of employee negative emotions and well-being, and although this effect might extend to employees' subsequent undesirable behaviors (e.g., CWB), no work to date has examined this idea.

Third, considering other similar stressors, previous research has shown that daily role stressors and injustice (Yang & Diefendorff, 2009), and daily perception of event-based fairness (Matta et al., 2014) positively predict daily CWB through negative emotions. Given the conceptual parallels of illegitimate tasks with role stressors and organizational injustice and that justice theories can be used to explain the effects of illegitimate tasks (Semmer et al., 2010; Semmer et al., 2015), it is likely that daily illegitimate tasks will have a similar effect on day-to-day CWB through negative emotional responses.

Taken together, we make the following prediction regarding daily illegitimate tasks and next-day CWB. We chose to focus on the next-days display of CWB to temporally separate our predictor and outcome in order to better understand the direction of this relationship.

3 | HYPOTHESIS DEVELOPMENT

3.1 | Illegitimate tasks and CWB linkage

This work draws on the stressor–emotion model of CWB (Spector & Fox, 2005) to understand the linkage between illegitimate tasks and CWB. This model focuses primarily on CWB as the outcome and argues that perceived workplace stressors are the immediate causes of negative emotions (e.g., anger) that further lead to CWB.
3.2 Mediating effect of anger

“Negative emotions” is an umbrella term encompassing many discrete emotions that have been found to mediate the effect of daily stressors on CWB (Matta et al., 2014; Yang & Diefendorff, 2009). However, discrete negative emotions have been relatively understudied in the framework. A meta-analysis (Shockley, Ipsas, Rossi, & Levine, 2012) found only a few studies examining the relationship between discrete negative emotions and CWB using within-person designs. Thus, examining the mediating role of discrete negative emotions in stressor-CWB relationships is important for a more refined understanding of these pathways. We chose anger because this emotion in particular should increase when individuals experience threats to their self-esteem (Meier, Gross, Spector, & Semmer, 2013). As a threat to people’s social esteem, daily illegitimate tasks are likely to contribute to the daily fluctuation of anger especially, and empirical evidence has supported this notion (Eatough et al., 2016). In addition, given that illegitimate tasks are not consistent with employees’ usual task responsibilities, being assigned with these tasks might be perceived as a violation of social norms and thus lead to feelings of anger.

Anger has also been linked with CWB (Shockley et al., 2012) and is found to mediate the stressor-CWB relationship (Roy et al., 2012) with between-person designs. Thus, it is likely that the effect of daily illegitimate tasks on anger (Eatough et al., 2016) can be carried over to next-day CWB. However, it needs to be pointed out that anger does not necessarily always have negative consequences, but sometimes may also have positive consequences (Gibson & Callister, 2010). Anger experience can function to internally signal that one’s goals are blocked, and its external expression can signal boundaries of appropriate behaviors and lead to resolutions to issues of injustice and inequity (Gibson & Callister, 2010; Van Kleef, 2009). Geddes and Callister (2007) proposed a dual threshold model of anger, suggesting that anger is likely to have negative outcomes when employees suppress anger or when the expression of anger is perceived as deviant. When employees express their anger in an appropriate manner, more positive outcomes are likely.

Nevertheless, based on the stressor-emotion model of CWB (Spector & Fox, 2005) and previous findings on the bivariate illegitimate tasks-anger and anger-CWB relationships (Eatough et al., 2016; Roy et al., 2012; Shockley et al., 2012), we propose that end-of-work anger mediates between daily illegitimate tasks and next-day CWB.

Hypothesis 2. Daily end-of-work anger will mediate the relationship of daily illegitimate tasks on next-day CWB.

3.3 Moderating effect of time pressure

This study aims to extend the literature by examining a daily contextual factor, time pressure, as a potential exacerbating factor on the illegitimate tasks-anger relationship. The stressor-emotion model of CWB (Spector & Fox, 2005) points out the important role of boundary factors (e.g., personality traits and perceived control) that moderate the relationship between stressors and negative emotions, and the relationship between negative emotions and CWB. Previous studies using both cross-sectional between-person designs (e.g., Bowling & Eschleman, 2010; Fox et al., 2001; Penney & Spector, 2005) and within-person designs (e.g., Yang & Diefendorff, 2009) have examined and found support for the moderating effects of various personality traits, such as conscientiousness, agreeableness, negative affectivity, trait anger, and trait anxiety, on the relationship between stressors and CWB. Yet much less attention has been paid to the potential moderating effects of factors outside the individual, such as environmental conditions or the context of the workday in the stressor-CWB relationship. Exploring boundary conditions such as time pressure in the illegitimate tasks-anger-CWB link is important because context very likely shapes the type and intensity of emotional reactions to illegitimate tasks, but our current understanding is extremely limited.

A sense of high time pressure is experienced by employees when there is not sufficient time to complete job-related work (Kinicki & Vecchio, 1994). Time pressure is expected to play an important role on the illegitimate task-anger relationship because time pressure reflects more intense conflict between legitimate responsibilities and illegitimate task assignments. For example, when employees are under high time pressure to finish what they are supposed to complete, being assigned with illegitimate tasks will not only make them perceive that they are not respected but also lead to more perceived task conflict between completing legitimate tasks and illegitimate tasks. We propose this increased perception of disrespect and presence of conflicting demands are likely to compound, making employees feel angrier.

In addition, time pressure is an occupational stressor on its own and is frequently studied in organizational research (Widmer, Semmer, Kalin, Jacobshagen, & Meier, 2012). According to the conservation of resources theory (Hobfoll, 1989), employees will be more vulnerable to resource loss when they have fewer resources and in turn will suffer from more strains. As compared to employees with low time pressure, employees with high time pressure likely experience more resource depletion and are in turn likely to be more vulnerable to negative affective reactions when being assigned illegitimate tasks. In turn, we propose that illegitimate tasks on high time pressure days create a more affectively charged experience as compared to when illegitimate tasks are assigned on low time pressure days. When time pressure is present, illegitimate tasks are likely to become more threatening in nature, which should be more likely to elicit an emotional reaction. A workday with both high illegitimate tasks and high time pressure should be more likely to lead to increased anger. On the basis of the aforementioned discussion, we proposed the following moderation hypothesis.

Hypothesis 4. Daily time pressure will moderate the indirect effect of daily illegitimate tasks on next-day CWB through daily end-of-work anger, with the indirect effect being stronger when time pressure is high.

Combining our previous two hypotheses on mediation and moderation, we also proposed the following moderated mediation hypothesis.

Hypothesis 3. Daily time pressure will moderate the positive relationship between daily illegitimate tasks and daily end-of-work anger, with the relationship being stronger when time pressure is high.

All hypotheses are presented in Figure 1.
were recruited for a 2-week daily diary study. We excluded 10 employees from the study due to not attending enrollment session or blatant noncompliance with study procedures, leaving us with 114 participants. Employees were recruited via advertisements, flyers, emails, and participant referrals posted around two U.S. university campuses. Inclusion criteria included being 18 years or older, working 35 or more hours per week, being fluent and literate in English, and having tenure of at least 1 year at their current job. Participants worked in university administrative positions. Participants were mostly female (81%), middle aged (M = 41.8, SD = 12.9), and had tenure of 6.9 years (SD = 8.1). Upon completion of the study, participants received a VISA gift card for their participation. Institutional Review Board approval from participating institutions was obtained.

4.1 | Participants

One hundred and twenty-four full-time administrative staff members were recruited for a 2-week daily diary study. We excluded 10 employees from the study due to not attending enrollment session or blatant noncompliance with study procedures, leaving us with 114 participants. Employees were recruited via advertisements, flyers, emails, and participant referrals posted around two U.S. university campuses. Inclusion criteria included being 18 years or older, working 35 or more hours per week, being fluent and literate in English, and having tenure of at least 1 year at their current job. Participants worked in university administrative positions. Participants were mostly female (81%), middle aged (M = 41.8, SD = 12.9), and had tenure of 6.9 years (SD = 8.1). Upon completion of the study, participants received a VISA gift card for their participation. Institutional Review Board approval from participating institutions was obtained.

4.2 | Procedure

This study used daily diary methodology. For two consecutive work-weeks, participants were required to fill out one survey immediately upon arrival to work before their work shift began, and one after their work shift immediately prior to departing work for the day. Individuals missing one of the two surveys were contacted to ask if he/she would like to voluntarily make up a full day’s participation, and this resulted in an average of 10.1 daily entries (with either one survey or two surveys per day) per person (total daily entries N = 1,157). All surveys were distributed through emails, and participants could take the survey on any devices (e.g., computers, phones, or tablets) that had Internet access. At the enrollment session, participants were shown how to use a unique anonymous code method, which required them to answer three “secret questions”: high school name, birth city, and mother’s birth month and day. These secret questions linked their data from multiple time points without using any identifying information in order to keep their responses anonymous within the dataset. Secret questions were asked of participants on all subsequent diaries allowing retroactive linking of each participant’s data. All daily surveys were automatically time-stamped so that only surveys completed at the right time were included.

In the morning diaries, state anger reports were collected before work started. In the afternoon diaries, reports of that day’s illegitimate tasks, time pressure, CWB, and state end-of-work anger were reported. All diaries were then coded for consecutive days such that one diary’s data were not used for carryover analyses (e.g., the effect of daily illegitimate tasks on next-day CWB) unless the next day’s diary data were also available. First, Fridays were not used to predict Monday mornings; second, if a day was missing, then the previous day’s illegitimate tasks would not serve as the predictor, and the next day’s CWB would not serve as the outcome. This resulted in 780 pairs of observations from two consecutive days. We used the original 1,157 entries for the multilevel factor analysis and used the 780 paired entries for descriptive statistics and hypothesis testing.

4.3 | Measures

We used the total scores of all items for each of the following variables.

4.3.1 | Illegitimate tasks

Daily illegitimate tasks were assessed with the eight-item Bern Illegitimate Task Scale (Semmer et al., 2010). The instructions asked the participant to rate how many times each of the statements has happened during that day’s work. An example item is “Did you have work tasks to take care of which kept you wondering if they should be done by someone else?” Response options for each item were on a 6-point frequency scale ranging from zero times (1) to five or more times (6). The reliability coefficients of this scale ranged from 0.86 to 0.96 across the 10 days (M = 0.93).

4.3.2 | Counterproductive work behavior

CWB was measured with a 10-item version of the Counterproductive Work Behavior Checklist (Spector, Fox, Penney, et al., 2006) in the afternoon diary. We relied on Spector, Fox and Domagalski (2006) reports of frequency of endorsement of CWB to select items, considering those with the highest frequency of endorsement in order to increase the likelihood of capturing the behavior within our 2-week timeframe for our sample. The stem item used was “How many times have you done each of the following things at work today...” with statements such as “taken a longer break than you were allowed to take at your present job?” and “...pursively worked slowly when things needed to get done?” Response options for each item were on a 6-point frequency scale ranging from zero times (0) to five or more times (5).

4.3.3 | Anger

Anger was measured with three items each adapted from the Strain Symptom Inventory (Caplan, Cobb, French, Van Harrison, & Penneau, 1980). Example items are “To what extent do you feel angry right now?” and “To what extent do you feel aggravated right now?” Response options for each item are on a 5-point scale ranging from not at all (1) to very much (5). This scale was administered both in the morning diary and in the afternoon diary. The reliability coefficients ranged from 0.75 to 0.96 across the 10 days (M = 0.88).

4.3.4 | Time pressure

Time pressure was measured with two items from Semmer, Zapf, and Dunckel (1999). Items were “During today’s work, I had to work faster than normal in order to complete my work” and “During today’s work, I
was pressed for time. Response options for each item were on a 5-point scale ranging from strongly disagree (1) to strongly agree (5). This scale was administered in the afternoon diary. The reliability coefficients ranged from 0.77 to 0.96 across the 10 days (M = 0.88).

4.3.5 Demographics

Demographic information was collected at the enrollment session (Time 1), including gender, age, job title, and tenure.

4.4 Data analysis

Because our data has two levels with daily measurements (Level 1) nested within individuals (Level 2), we used multilevel modeling to test our hypotheses with Mplus 7.02 (Muthén & Muthén, 2010). Three models were tested. In Model 1, we examined the effect of daily illegitimate tasks on next-day CWB while controlling for CWB of the previous day at level 1. In Model 2, we examined our mediation hypothesis by estimating the effect of daily illegitimate tasks on end-of-work anger while controlling for before-work anger and estimating the effect of end-of-work anger on next-day CWB while controlling for both that day’s illegitimate tasks and CWB of the previous day; all effects were tested at Level 1. On the basis of Model 2, in Model 3, we specified random slope effects for both the main effect of illegitimate tasks on daily end-of-work anger and estimating the relationship between daily illegitimate tasks and next-day CWB. In addition, we estimated the covariances among random slopes, between random slopes and intercepts, and between intercepts for anger and CWB (Models 2 and 3 only).

5 RESULTS

Tables 1 and 2 show results of descriptive statistics, including means, standard deviations, and correlations among studied variables at the between-person level and within-person level, respectively. Intraclass correlations are presented in Table 2 for within-person variables. A multilevel confirmatory factor analysis was conducted to examine the construct validity of five daily measures (morning anger, time pressure, end-of-work anger, illegitimate tasks, and CWB). Because we had a small sample size at person level, we followed practices in studies using the same diary design (e.g., van Hooff & Geurts, 2015) and recommendations by Little, Cunningham, Shahar, and Widaman (2002). Specifically, for illegitimate tasks and CWB, we randomly grouped their items into three groups, respectively; then we created three parcels for each measure by calculating the average score of each item group. Meanwhile, we kept original items as indicators for state anger (morning and after-work) and time pressure because they had 3 and 2 items, respectively. Our 5-factor model (morning anger, time pressure, end-of-work anger, illegitimate tasks, and CWB) fitted our data well ($\chi^2(134) = 227.37, p < .01$, confirmatory fit index = .98, root mean square error of approximation = .03). In addition, the 5-factor model fitted our data significantly better than 1-factor model ($\chi^2(154) = 3,359.58, p < .01$, confirmatory fit index = .29, root mean square error of approximation = .13) with $\Delta \chi^2(20) = 3,132.21, p < .001$. These results provided evidence for the distinction among the daily constructs in the current study.

Results of multilevel modeling tests are shown in Table 3 with unstandardized coefficients and standard errors. As shown in the table, the main effect of daily illegitimate tasks on next-day CWB was significant ($\gamma = 0.02, SE = 0.01, p < .05$), thus supporting Hypothesis 1. Daily illegitimate tasks explained 3.4% of the within-person variance of next-day CWB. In Model 2, the main effect of illegitimate tasks on daily end-of-work anger was significant ($\gamma = 0.12, SE = 0.02, p < .001$), as well as the effect of daily end-of-work anger on next-day CWB ($\gamma = 0.05, SE = 0.02, p < .05$), but the direct effect of daily illegitimate tasks on next-day CWB became not significant ($\gamma = 0.01, SE = 0.02, n.s.$). The indirect effect of daily illegitimate tasks on next-day CWB was significant (indirect effect = 0.007, $SE = 0.003, p < .05$, 95% CI [0.001,

| TABLE 1 Descriptive statistics and bivariate correlations between Level 2 variables |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                 | M      | SD     | 1      | 2      | 3      | 4      | 5      | 6      | 7      |
| 1. Age                          | 41.86  | 12.92  | .08    | .00    | .00    | .00    | .00    | .00    |
| 2. Gender                       | 1.87   | 0.34   | .45**  | .00    | .00    | .00    | .00    | .00    |
| 3. Tenure                       | 7.00   | 7.89   | .00    | .00    | .00    | .00    | .00    | .00    |
| 4. Aggregated morning anger     | 3.55   | 0.90   | .00    | .00    | .00    | .00    | .00    | .00    |
| 5. Aggregated illegitimate tasks| 4.23   | 4.72   | .00    | .00    | .00    | .00    | .00    | .00    |
| 6. Aggregated time pressure      | 5.03   | 1.81   | .00    | .00    | .00    | .00    | .00    | .00    |
| 7. Aggregated end-of-work anger  | 3.85   | 1.16   | .00    | .00    | .00    | .00    | .00    | .00    |
| 8. Aggregated next-day CWB      | 0.36   | 0.70   | .00    | .00    | .00    | .00    | .00    | .00    |

Note. CWB = counterproductive work behavior. N = 104–114. Gender coded such that male = 1, female = 2; age measured in years; tenure measured in years. Aggregated variables are the employee’s average reported across the 2-week study period.

*p < .05. **p < .01.
When time pressure was low (p < .05, 95% CI [0.000, 0.019]) when time pressure was high, but not
found that daily illegitimate tasks had a significant indirect effect on
daily legitimate tasks on end
work anger was stronger when time pressure was high, thus supporting Hypothesis 3. Simple slope tests
showed that the effect of illegitimate tasks on end-day work anger were significantly different from zero when time pressure was high (γ = 0.16, SE = .03, p < .001) but not when time pressure was low (γ = 0.04, SE = 0.02, n.s.). We calculated conditional indirect effects of daily ille-
gitimate tasks on next-day CWB through end-of-work anger and found that daily illegitimate tasks had a significant indirect effect on
next-day CWB through end-of-work anger (γ = 0.009, SE = 0.005, p < .05, 95% CI [0.000, 0.019]) when time pressure was high, but not
when time pressure was low (γ = 0.002, SE = 0.002, n.s., 95% CI [-0.001, 0.005]). Thus, our Hypothesis 4 was supported.

6 | DISCUSSION

Using a within-person design, the current study examined the relation-
ship between illegitimate tasks and CWBs with anger as a mediator,
and time pressure as a moderator. Our findings indicate that within
individuals, daily illegitimate tasks have a positive direct effect on
next-day CWB, and this effect is mediated by daily end-of-work anger.
Further, we found that when daily time pressure is high, daily ille-
gitimate tasks have a stronger effect on end-of-work anger and a stronger
effect on next-day CWB through end-of-work anger.

### Table 2: Bivariate correlations between Level 1 variables

<table>
<thead>
<tr>
<th></th>
<th>ICC</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time pressure</td>
<td>.53</td>
<td>4.99</td>
<td>2.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegitimate tasks</td>
<td>.58</td>
<td>4.09</td>
<td>5.85</td>
<td>.24**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-of-work anger</td>
<td>.33</td>
<td>3.77</td>
<td>1.62</td>
<td>.18**</td>
<td>.32**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next-day CWB</td>
<td>.34</td>
<td>0.33</td>
<td>0.96</td>
<td>-.04</td>
<td>.07*</td>
<td>.10**</td>
<td></td>
</tr>
</tbody>
</table>

Note: CWB = counterproductive work behavior; ICC, intraclass correlation; illegitimate tasks and next-day CWB means and standard deviations are values across the 10 working days, N = 780.

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

### Table 3: Unstandardized coefficients and standard errors of the multilevel model results

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CWB (Day t + 1)</td>
<td>End-of-work anger (Day t)</td>
<td>CWB (Day t + 1)</td>
</tr>
<tr>
<td>Morning anger (Day t)</td>
<td>0.12 (0.05)*</td>
<td>0.05 (0.02)*</td>
<td>0.13 (0.04)**</td>
</tr>
<tr>
<td>End-of-work anger (Day t)</td>
<td>0.05 (0.04)</td>
<td>-0.004 (0.04)</td>
<td>0.02 (0.40)</td>
</tr>
<tr>
<td>CWB (Day t)</td>
<td>0.02 (0.01)*</td>
<td>0.12 (0.02)**</td>
<td>0.01 (0.02)</td>
</tr>
<tr>
<td>Illegitimate tasks (Day t)</td>
<td>0.06 (0.03)</td>
<td>0.04 (0.01)**</td>
<td>0.004 (0.01)</td>
</tr>
<tr>
<td>Time pressure (Day t)</td>
<td>0.02 (0.02)</td>
<td>0.02 (0.02)</td>
<td></td>
</tr>
</tbody>
</table>

Note. CWB = counterproductive work behavior.

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

### Figure 2: Moderating effect of daily time pressure on the relationship between daily illegitimate tasks and daily end-of-work anger

The positive relationship between daily illegitimate tasks and next-
day CWB is consistent with previous research that found a direct
effect of chronic illegitimate tasks on CWB while controlling for
effort–reward imbalance and organizational justice (Semmer et al., 2010). Further, this finding demonstrates that within individuals, daily
experiences of illegitimate tasks can predict employees’ subsequent
deviant and undesirable behavior, suggesting that illegitimate tasks as
a workplace stressor can have short-term detrimental effects on
employees and organizations. This finding also contributes to the vast
literature examining stressors as predictors of CWB (e.g., Hershcovis
et al., 2007), the growing literature on the negative influence of illegi-
timate tasks (Semmer et al., 2015), as well as the newly developing lit-
erature using within-person design to examine daily stressors as
predictors of within-person fluctuation of CWB (Matta et al., 2014;
Yang & Diefendorff, 2009). Further, our finding is consistent with retal-
iation theory (Skarlicki & Folger, 1997; Skarlicki, Folger, & Tesluk,
1999) and could suggest that employees receiving more illegitimate
tasks are likely to retaliate with more CWB.

Also, following the stressor–emotion model of CWB (Spector &
Fox, 2005), as well as previous research using within-person designs
to examine negative emotions as mediators between daily stressors
and daily CWB (Matta et al., 2014; Yang & Diefendorff, 2009), we
examined whether a specific discrete negative emotion, daily end-of-
work anger, serves as a potential mediator between illegitimate tasks
and next-day CWB. In support of our hypotheses, daily illegitimate tasks positively predicted end-of-work anger and daily end-of-work anger positively predicted next-day CWB. Our findings provide evidence in support of the stressor–emotion model CWB and suggest that anger is a discrete negative emotion that plays an important role in mediating the effect of illegitimate tasks on CWB. This adds to the limited number of within-person studies examining discrete negative emotions in the literature of CWB (Shockley et al., 2012).

Our findings on the interaction effect between illegitimate tasks and time pressure on end-of-work anger may have occurred for several reasons. First, days with high time pressure represent scarcity in the resource of time, and this lower resource level could make strain reactions to the stressor of illegitimate tasks stronger. In addition, the cumulative effect of multiple stressors within 1 day may create stronger emotional reactions in employees. Management of one stressor may drain resources so that employees are left with low reserves to cope with other stressors (Hobfoll, 1989), making the effect of the other stressor even stronger. Second, high time pressure might make employees perceive a stronger sense of conflict between their within-role demands and the illegitimate tasks they face, creating a higher level stressor of role conflict and leading to stronger affective reactions. Nevertheless, our finding extends previous CWB studies focusing on individual characteristics as moderators, pointing out the importance of examining daily fluctuating contextual factors as important boundary conditions.

It is worth noting that the effect of illegitimate tasks on next-day CWB was smaller (3.4% explained within-person variance of CWB) as compared to previous findings with other occupational stressors (8.2–12.1% in Yang & Diefendorff, 2009; 13.6–15.4% in Matta et al., 2014). One potential reason for this is that illegitimate tasks represent a narrower construct than those studied in Yang et al. (multiple stressors such as injustice; 2009) and Matta et al. (general significant work events; 2014). Thus, illegitimate tasks might contribute relatively less to predicting within-person variance of daily CWB due to the more precise nature of the experience and its measurement. Because we did not control for other potential predictors of CWB, future research is encouraged to examine the incremental effect of illegitimate tasks in predicting CWB above and beyond other stressors to determine its unique predictive ability for CWB.

6.1 | Theoretical implications

On a theoretical level, our study provides additional support for the SOS framework, demonstrating daily illegitimate tasks relate to heightened employee anger at the end of the workday. This finding is in line with the premise of social identity threat (Semmer et al., 2007) as well as previous empirical findings (Eatough et al., 2016). Furthermore, this work extends our previous knowledge regarding the potential depth of impact this stressor can have on employees as the damage created may reach even beyond a psychological level and materialize in behavioral reactions as well. Given these findings, it is critical that future research examine the impact that illegitimate tasks have on other employee behavioral outcomes, such as organizational citizenship behavior (OCB), task performance, and turnover. Further, different methodologies (e.g., longitudinal designs) can be used to better understand how the effects of illegitimate tasks unfold on behaviors through assessing across-time effects.

The current study also found support for the mediating effect of anger in the illegitimate task–CWB relationship. The mediation effect provides support for the value in integrating the SOS framework (Semmer et al., 2007) with other existing theoretical models to capture a larger nomological network of illegitimate tasks. In this study, we combined the notions of the SOS framework with those of the stressor–emotion model of CWB (Spector & Fox, 2005). Negative emotions, such as anger, are a theoretically expected outcome of illegitimate tasks (Semmer et al., 2007), and empirical work demonstrates a consistent link between daily experiences of illegitimate tasks and anger (Eatough et al., 2016). Combining this knowledge with the stressor–emotion model of CWB that would posit anger to increase the likelihood of deviant behavior, our mediated pathway is aligned with a larger, integrated theoretical framework. Thus, future work on illegitimate tasks may benefit from aligning the SOS framework with other existing models in an effort to predict other potential distal behavioral outcomes of illegitimate task assignments such as turnover or maladaptive coping behaviors. For example, combining the SOS framework with the affective events theory (Weiss & Cropanzano, 1996) could help researchers propose and test potential effects of illegitimate tasks on other judgment-driven behaviors and affect-driven behaviors as proposed by AET.

In addition, this study was the first to look at the interactive effect of a daily contextual variable (time pressure) with illegitimate tasks and found that time pressure exacerbated employee anger in response to illegitimate tasks. This approach extends previous studies examining stable dispositional factors (e.g., personality traits) as boundary conditions of the effects of illegitimate tasks and points out the importance of how other daily fluctuating variables might exacerbate or buffer the effects of illegitimate tasks. Future work might be well served to explore other kinds of daily contextual factors, such as work–family conflict, coworker support, and coworker mistreatment as moderators of daily illegitimate task experiences.

6.2 | Practical implications

On a practical level, this study has several implications. First, this work adds to the growing body evidence showing negative effects of illegitimate tasks on employee emotions. Moreover, this negative emotional response can lead to CWB, making illegitimate tasks very costly to the organization as well as the individual. Thus, organizations and managers should attempt to reduce illegitimate tasks by implementing appropriate interventions. For example, a job redesign might help avoid the occurrence of illegitimate tasks, and fostering of feedback loops and open communication between subordinates and supervisors might help supervisors to be aware of which tasks are perceived as illegitimate by their subordinates.

Second, we found that employees' vulnerability to anger reactions from illegitimate tasks varies by workday. Workdays where an employee feels high time pressure make an employee particularly susceptible to having negative reaction in response to an illegitimate task assignment. When time is tight and the pressure is on, illegitimate task requests appear to be even more unfavorable. This underscores the
importance of managers fostering strong, clear communication with their employees so that they may have insight into the daily experience of their workforce. Additionally, if an illegitimate task is unavoidable (which may be the case on occasion), we recommend that supervisors assist employees in re-prioritizing their tasks for the day, in an effort to combat time pressure.

Third, the mediating role of anger points out an important mechanism through which illegitimate tasks might lead to employee destructive behaviors. Especially because illegitimate tasks are sometimes unavoidable, it is critical that supervisors provide effective supportive behaviors or help employees regulate their negative emotions (anger in particular) to help prevent their cascade to additional undesirable outcomes such as CWB. Training programs may be one way to encourage healthy processing of emotion. For example, Buruck, Dörfel, Kugler, and Brom (2016) demonstrated that a standardized emotion regulation training (Affect Regulation Training) improved employees’ emotion regulation skills and well-being. Thus, providing similar trainings to employees might help them effectively regulate their anger driven by experiences of illegitimate tasks and thus potentially reduce the occurrence of CWB as a result of illegitimate tasks.

6.3 Limitations

Our study has several limitations. First, although we separated our predictor (daily illegitimate tasks) and outcome (next-day CWB), all our variables were self-reported. Reporting bias, especially when it comes to CWB, may have altered responses. Future research using other reports or objective measures could provide additional evidence for the relationships examined in the current study.

Second, although a strength of our study is that we examined the lagged effect of daily illegitimate tasks on next-day CWB, causal inferences cannot be made with our design. Given that daily illegitimate tasks and daily end-of-work anger were measured at the same time, we are not able to definitively say that state anger did not distort perceptions of that day’s illegitimate tasks. It is possible that when an employee has higher anger, they may also tend to be assigned more illegitimate tasks. To address this concern, we ran two alternative models using morning anger to predict the same day illegitimate tasks and using end-of-work anger to predict next-day illegitimate tasks while controlling for the illegitimate tasks of the previous day. Neither of the effects was significant. Thus, these alternative models were not supported. Future research that separately measures daily illegitimate tasks, time pressure, state anger, and daily CWB or collects more measures of each across the day could provide additional evidence for the flow of events.

Third, our sample consisted of full-time staff members working in two universities with the majority of them being female, which calls for caution when generalizing our results to other populations. A strength of this sample is that professional roles were similar across all subjects, but we encourage future studies to examine the effects of illegitimate tasks on CWB using a more diverse sample.

Fourth, the direct illegitimate task–CWB link leaves open the possibility of other mediating pathways. Future work should examine other discrete emotional responses to illegitimate tasks such as reductions in organizational-based self-esteem and increases in resentment as potential mechanisms by which this stressor leads to deviant behavior.

Fifth, our finding on the relationship between daily experience of illegitimate tasks and next-day CWB through anger reflects within-person effects. However, on a macro level, sustained experience of illegitimate tasks can represent the culture or norms of a working unit and an organization. Thus, future research should examine both (a) how employees’ experiences of illegitimate tasks can form a shared perception of a norm at the team or organizational level, and (b) whether norms influence the prevalence or outcomes of illegitimate tasks.

7 CONCLUSION

This work extends previous findings regarding the impact illegitimate tasks have on employees and is the first intraindividual examination of illegitimate tasks on employee work behaviors. In sum, our findings demonstrate a within-person relationship between daily experience of illegitimate tasks and next-day CWB and illustrate anger as one mechanism by which such association occurs. We also identified a moderating factor in this linkage, time pressure, giving insight into the potential contextual factors that play a role in predicting illegitimate task-ignited negative emotions. Our findings underscore the importance of further attention to this area of occupational stress research.

REFERENCES


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