

Significant work events and counterproductive work behavior: The role of fairness, emotions, and emotion regulation

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Summary

In this diary study, we investigated multi-level predictors of daily counterproductive work behavior (CWB) relying on the theoretical frameworks of affective events theory and the emotion-centered model of CWB. We assessed significant work events, event-based fairness perceptions, negative emotional reactions to work events, and employee CWB over a 10-day period. We tested within-person relations predicting CWB, and cross-level moderating effects of two emotion regulation strategies (suppression and reappraisal). Results from a multi-level path analysis revealed that significant work events had both direct and indirect effects on negative emotional reactions. Further, negative emotional reactions in turn mediated the relationships between significant work events and all forms of daily CWB as well as the relationship between event-based fairness perceptions and daily CWB-O. Results also supported the moderating role of reappraisal emotion regulation strategy on relations between significant work events and negative emotional reactions. Less support, however, was found for the moderating influence of suppression on the link between negative emotional reactions and CWB. Among the broad work event categories we identified, our supplemental analyses revealed that negative work events involving interactions with supervisors elicited the highest levels of employee negative emotional reactions. We discuss the theoretical and practical implications of these findings. Copyright © 2014 John Wiley & Sons, Ltd.

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Counterproductive work behavior (CWB) is a pervasive topic of study among organizational researchers. CWB, defined as volitional employee behavior intended to harm the organization and its members, poses threats to effective organizational functioning (Spector & Fox, 2002). CWB comprises many behaviors, such as withholding effort, purposely performing tasks incorrectly, verbal and physical abuse, and theft (Penney & Spector, 2005; Spector et al., 2006), which are costly for organizations (Bennett & Robinson, 2000). Research on antecedents of CWB has shown that both job stressors (e.g., unfair procedures) and personality traits (e.g., trait affectivity) contribute to CWB (Dalal, 2005; Johnson, Tolentino, Rodopman, & Cho, 2010; Spector & Fox, 2005). Organizational injustice in particular is a powerful and pervasive antecedent of CWB (Berry, Ones, & Sackett, 2007; Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Hershcovis et al., 2007) because it threatens employees' economic and social well-being, causing victims to respond in ways that harm organizational functioning (Johnson & Lord, 2010; Jones, 2009; Skarlicki & Folger, 1997). Responses to stressors, such as injustice, are typically accompanied by negative emotions and affective states, which are proximal predictors of CWB that mediate stressor–CWB relations (e.g., Penney & Spector, 2005; Weiss & Cropanzano, 1996).

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To date, the majority of research on CWB has utilized cross-sectional designs where relationships are examined at the between-person level (Robinson & Greenberg, 1998). There are, however, some exceptions. Judge, Scott, and Ilies (2006) assessed daily job dissatisfaction, interpersonal unfairness, state hostility, and CWB over 3 weeks. They showed that state hostility mediated relations of interpersonal unfairness with job dissatisfaction, and job dissatisfaction mediated relations of state hostility with CWB. More recently, Yang and Diefendorff (2009) demonstrated that negative emotions fully mediated daily relations of interpersonal unfairness and CWB. Other within-person research has examined employee emotions on a daily basis but omits the events that precede the emotions and behaviors (e.g., Dalal, Lam, Weiss, Welch, & Hulin, 2009; Ilies & Judge, 2002; Ilies, Scott, & Judge, 2006). For example, Dalal et al. (2009) demonstrated evidence for relations of daily emotions with CWB but did not examine the specific work events that precipitated those emotions.

The aim of this research was to study the within-person process through which significant work events elicit CWB. We also examined fairness perceptions and negative emotional reactions evoked by significant work events, enabling us to test a more comprehensive model of CWB. Specifically, we posit that employees not only have negative emotional reactions to events but that these emotional reactions may also be based on cognitive appraisals of the event (e.g., how un/fair it is), all of which influence CWB enactment. Thus, our model combines the two major perspectives in predicting CWB: (i) CWB as an emotion-based response to stressful organizational conditions (e.g., Chen & Spector, 1992; Fox & Spector, 1999) and (ii) CWB as a cognition-based response to experienced injustice (e.g., Greenberg, 1990; Skarlicki & Folger, 1997). We relied on affective events theory (AET; Weiss & Cropanzano, 1996) and the emotion-centered model of voluntary work behavior (Fox, Spector, & Miles, 2001) to support our research.

We took a within-individual approach in the study because AET (Weiss & Cropanzano, 1996) posits that specific work events are antecedents of affective reactions and behaviors. Such an approach is necessary in order to capture variance over time due to specific work events (Dimotakis, Scott, & Koopman, 2011). Between-individual approaches primarily predict individuals' average levels of emotions and behaviors at a single point in time and therefore treat fluctuations over time (e.g., due to specific events) as error variance even when theory may suggest those fluctuations are meaningful (Judge et al., 2006). Further, within-individual approaches are critical to the study of emotions because emotions are elicited by a specific cause and are short lived (Frijda, 1986; Lazarus, 1991).

We extend the foundational within-person work of Judge et al. (2006) and Yang and Diefendorff (2009) in two important ways. First, consistent with AET, we assessed significant work events as antecedents of CWB using both quantitative and qualitative methodologies. Participants reported significant discrete events that occurred at work and then rated the fairness of significant events along several dimensions. Past studies using AET and the emotion-centered model have typically treated work events as specters that lay outside of the model. The exogenous variables in the studies of Judge et al. and Yang and Diefendorff, for example, were perceptions of fairness rather than the events that elicited those perceptions. Although fairness perceptions may reflect one or more events that occurred during the day, they may be influenced by other phenomena as well (e.g., perceptions of social support and relationship quality, and transient states such as mood), which led Judge et al. (2006) to call for research that examines specific work events rather than general perceptions. Moreover, the open-ended qualitative information allowed us to identify major categories of events, providing a better understanding of when various types of events more strongly predict CWB.

A second way in which our study extends existing research is that we examined cross-level moderating effects of emotion regulation styles on within-person relations. Emotion regulation refers to "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998b, p. 275). We operationalize emotion regulation as between-individual differences in emotion regulation strategies as Gross and John (2003) demonstrated that individuals have relatively stable tendencies to systematically use particular emotion regulation strategies, an idea backed by empirical evidence (e.g., John & Gross, 2004; Liu, Prati, Perrewé, & Brymer, 2010). Examining boundary conditions of the within-person process through which significant work events elicit CWB is important because these moderators impact the type and intensity of such behavior, which has implications for the management of CWB at work.

Examining the moderating role of emotion regulation style in our study is fitting given the central role of emotions in Weiss and Cropanzano’s (1996) AET and Spector and Fox’s (2002) emotion-centered model. Employees may perform CWB as a way of regulating their emotions and coping with work stressors in order to reduce the experience of negative emotions (Penney & Spector, 2007). In this regard, specific emotion regulation strategies may make employees more or less prone to experiencing negative emotions and exhibiting CWB in response to work stressors. The emotion regulation strategies we examined are reappraisal, an antecedent-focused strategy that involves reframing events in order to alter their emotional impact, and suppression, a response-focused strategy that involves inhibiting emotion-expressive behavior (Gross, 1998b). We expected reappraisal would moderate relations of work events with emotional reactions, whereas suppression would moderate relations of emotional reactions with CWB. Our conceptual model is illustrated in Figure 1, and we provide theoretical evidence for the model in the subsequent sections.

Theoretical framework and hypotheses

The interplay of fairness, emotions, and CWB can be understood through the lens of AET (Weiss & Cropanzano, 1996), which explains the structure, causes, and consequences of employees’ affective experiences at work. According to AET, stable features of the work environment (e.g., a permissive organizational culture) predispose the occurrence of certain work events (e.g., supervisor incivility), which are the proximal causes of employees’ emotional reactions. Weiss and Cropanzano (1996) defined work events as something that occurs in a work setting during a particular period, which brings with it a change in what one is experiencing and feeling. They argue that affective events, in turn, have direct and indirect effects on employee behavior. In the former case, affective events may elicit affect-driven behavior such as spontaneous helping and harming. In the latter case, affective events slowly alter attitudes (e.g., job satisfaction) that in turn elicit purposeful behavior such as looking for employment elsewhere. Weiss and Cropanzano (1996) noted that justice experiences function as affective events that produce emotional reactions. Existing research supports many tenets of AET, demonstrating associations of work events with positive and negative emotions (Grandey, Tam, & Brauburger, 2002; Wegge, Dick, Fisher, West, & Dawson, 2006) and showing that these affective states in turn shape work attitudes (Niklas & Dormann, 2005) and behaviors (Ilies et al., 2006).

Spector and colleagues (Fox et al., 2001; Spector & Fox, 2002) introduced a conceptual variant of AET called the emotion-centered model of voluntary work behavior in order to specifically account for varying sources of CWB. This model posits that positive emotions invoked by the appraisal of work situations are likely to encourage

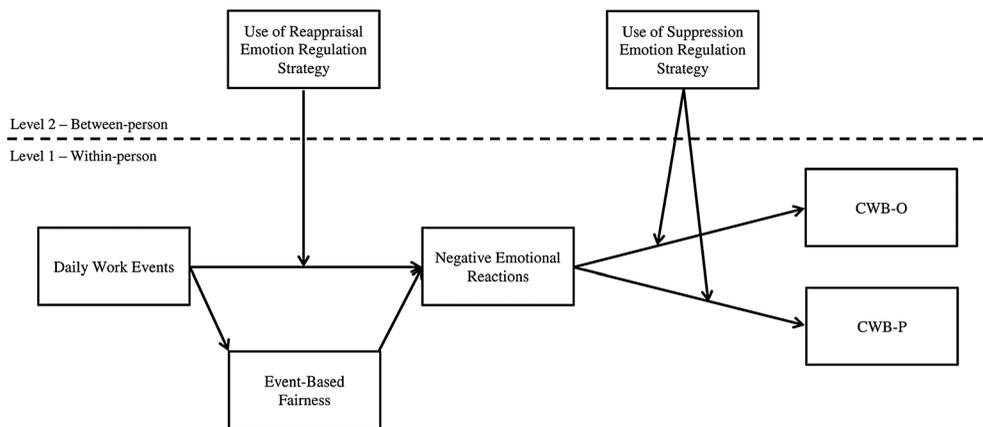


Figure 1. Proposed within- and between-person model of significant work events, event-based fairness, negative emotional reactions, and CWB

approach-type behaviors to remain in the situation, such as citizenship behaviors. In contrast, negative emotions resulting from appraisal of the situation as threatening elicit avoidance- and retaliation-type actions such as CWB. Such behaviors, although harmful for the company, may actually help the victim feel better as a result of evening the score by reciprocating the negative social exchange (Bies & Tripp, 2002). According to this model, environmental stressors and negative emotions are distal and proximal antecedents, respectively, of CWB. Empirical research has supported the mediating role that emotions play in the relations between stressors and CWB in both cross-sectional studies with between-person effects (e.g., Penney & Spector, 2005) and experience-sampling studies with within-person effects (e.g., Yang & Diefendorff, 2009). Much of this work centers around justice, such that unfair treatment at work is conceptualized as a stressor (Fox et al., 2001). When unfairness is experienced, it elicits negative emotions that in turn increase the likelihood of counterproductive and retaliatory behavior (e.g., Barclay, Skarlicki, & Pugh, 2005).

Compared with the emotion-centered model, AET provides a rather general framework to study work attitudes and behaviors. The theory distinguishes between attitudes and behaviors and how affective states impact each of them. Further, it emphasizes the importance of affective work events in this process. The emotion-centered model, on the other hand, specifically focuses on voluntary work behaviors such as OCB and CWB, and it highlights the unique relations that positive and negative affect have with each type of behavior. As our study focuses on CWB and aims to investigate the interplay of significant work events and negative emotional reactions for predicting CWB, we integrate AET and the emotion-centered model as the theoretical basis of our research. Both AET and the emotion-centered model highlight the importance of employee emotions as mediators of stressor–behavior relations, and they suggest that a within-person level of analysis is most appropriate when examining the interplay of events, emotions, and behavior.

Significant work events, event-based fairness, and negative emotional reactions for predicting CWB

A large portion of research in the CWB domain draws upon cognitive appraisal theories of emotion for a theoretical foundation (e.g., Cohen-Charash & Mueller, 2007; Dalal et al., 2009; Fox et al., 2001; Krischer, Penney, & Hunter, 2010; Meier & Spector, 2013), including research using AET and the emotion-centered model. Cognitive appraisal theories implicate specific events as the triggers of emotion and distinguish between thoughts about an event and emotional responses to the event (Smith & Lazarus, 1993). In the first stage of appraisal, events are evaluated for their relevance to well-being in simple positive or negative terms. At the second stage, the initial appraisal is followed by an evaluation of the importance of the situation, which influences the intensity of emotional reactions (Weiss & Cropanzano, 1996). AET and the emotion-centered model are consistent with appraisal theories of emotion, as they include work events and stressors as triggers of employee emotional reactions. In support of these theoretical arguments, empirical research suggests that work events directly influence employee emotional reactions (e.g., Dimotakis et al., 2011).

As mentioned earlier, work events involving justice are prime triggers of emotion, which include inequitable distributions of resources (distributive injustice), lack of voice and transparency in decision-making processes (procedural injustice), and disrespect during interpersonal interactions (interactional injustice; Colquitt, 2001). Research demonstrates that emotional reactions—especially anger and hostility—are elicited when employees judge an event to be unfair (Barclay et al., 2005; Rupp & Spencer, 2006; Weiss, Suckow, & Cropanzano, 1999). Skarlicki and Folger (1997) asserted that injustice gives rise to deontic anger, which causes victims to retaliate against the perceived source of injustice. Considering the theoretical and empirical evidence for the significant work events → negative emotional reactions link on the one hand and the significant work events → event-based fairness → negative emotional reactions link on the other hand, we posit that significant work events are likely to have both direct and indirect effects (via fairness) on negative emotional reactions.

Cross-sectional research has shown that CWB is often a response to negative emotions elicited by situations. For example, Chen and Spector (1992) demonstrated that feelings of anger and frustration predicted various forms of CWB such as sabotage, abuse, and absenteeism. Similarly, Fox and Spector (1999) showed that the relation between frustrating situations and CWB was mediated by affective reactions. CWB is also likely to be enacted as a response

to the emotions elicited by unfairness. Indeed, retaliation is a justice-seeking behavioral response accompanying the emotional responses of victims, and it includes efforts to regain what was lost and to punish offenders for transgressions (Bembenek, Beike, & Schroeder, 2007).

In sum, consistent with theory and initial empirical findings, we expect that negative significant work events will directly and indirectly (via unfairness perceptions) influence negative emotional reactions, ultimately translating into CWB. Although CWB can be directed at the organization (CWB-O) or specific persons (CWB-P), we have no theoretical basis for expecting differential relations between negative emotional reactions and CWB-O and CWB-P. We therefore propose the following:

Hypothesis 1: Event-based fairness perceptions will partially mediate the negative association between significant work events (where high and low scores indicate positive and negative events, respectively) and negative emotional reactions such that significant work events will have both (i) a direct negative effect and (ii) an indirect negative effect (via event-based fairness perceptions) on negative emotional reactions.

Hypothesis 2: Negative emotional reactions to work events will be positively related to (i) daily CWB-O and (ii) daily CWB-P.

Hypothesis 3: Negative emotional reactions to significant work events will mediate (i) the negative relationship between significant work events (where high and low scores indicate positive and negative events, respectively) and daily CWB-O and (ii) the negative relationship between significant work events (where high and low scores indicate positive and negative events, respectively) and daily CWB-P.

Hypothesis 4: Negative emotional reactions to significant work events will mediate (i) the negative relationship between event-based fairness perceptions and daily CWB-O and (ii) the negative relationship between event-based fairness perceptions and daily CWB-P.

Cross-level moderating effects of emotion regulation

Although emotions occupy a central role in AET and the emotion-centered model, emotion regulation has yet to be integrated with these theories. Emotion regulation refers to how individuals try to influence the emotions they have, when they have them, and how they experience and express those emotions (Gross, 1998b). Emotion regulation includes all of the conscious and unconscious efforts individuals invest into increasing, decreasing, or maintaining their emotional states (Gross, 1999). Borrowing heavily from the stress and coping literature, a more recent approach in studying emotion regulation builds on the notions of problem-focused coping aimed at altering the cause of stress, and emotion-focused coping aimed at altering the emotional aftermath (Folkman & Lazarus, 1980). Specifically, Gross (2002) proposed a process model of emotion regulation including various strategies such as situation selection, cognitive reappraisal, and expressive suppression. The latter two are among the most common emotion regulation strategies that people use in everyday life (Gross & John, 2003). Cognitive reappraisal involves construing a potentially emotion-eliciting situation in a way that changes its emotional impact. Viewing the criticism of a supervisor as helpful feedback and an opportunity to learn is an example of cognitive reappraisal. Expressive suppression involves inhibiting emotion-expressive behavior (Gross, 1998b). For example, an employee might greet her or his boss with a smile despite the anger she or he feels for not being promoted.

Gross and John (2003) concluded that reappraisal strategies typically result in more favorable outcomes (e.g., greater well-being) than do expressive suppression strategies. Although reappraisal is effective for decreasing the experience of negative emotion, suppression not only fails to decrease negative emotional experiences, but it also leads to increased physiological responding, memory impairment, and the depletion of cognitive resources (Gross, 1998a; Gross & John, 2003; Gross & Levenson, 1993; Harris, 2001; Richards & Gross, 2000). Research indicates that suppression is also disadvantageous in terms of its social consequences, as it has been shown to be associated with low social support and less use of instrumental and emotional social

support coping. Suppression has these drawbacks because individuals do not communicate their emotions and are perceived as unresponsive to the emotions of others (Gross, 2002).

Most studies investigating emotion regulation in organizational contexts have been conducted in the service industry by examining emotional labor owing to customer interactions (e.g., Grandey, Fisk, Mattila, Jansen, & Sideman, 2005; Groth, Hennig-Thurau, & Walsh, 2009; Scott & Barnes, 2011; Scott, Barnes, & Wagner, 2012). We believe, however, that employees' tendencies to engage in particular emotion regulation strategies may be fruitful for understanding the processes through which significant work events influence negative emotional reactions and those reactions influence behavior. For example, emotion regulation strategies may be used to reduce the negative emotional reactions that are elicited by daily work events, replacing them with positive (or at least less negative) emotions. Similarly, emotion regulation strategies may lessen the likelihood that negative emotional responses culminate in destructive behaviors such as CWB.

Extending these ideas, we propose that the strength of relations between negative emotional reactions and CWB depends on between-individual differences in emotion regulation styles.¹ Specifically, we suspect that reappraisal, as an antecedent-focused strategy, will moderate the relationship between significant work events and negative emotional reactions to those events. In particular, employees who rely on reappraisal strategies will react less negatively to negatively valenced significant work events because they are reappraised as less threatening (e.g., as challenges rather than hassles). In contrast, suppression is a response-focused strategy that is expected to moderate relations of emotional reactions with daily CWB. Given the relative ineffectiveness of suppression as a coping mechanism (Gross, 1998a; Gross & John, 2003; Gross & Levenson, 1993; Harris, 2001; Richards & Gross, 2000), employees who rely heavily on suppression will be less successful at inhibiting emotion-driven behavioral reactions such as CWB. The act of suppression decreases people's self-regulatory resources, and when these resources are depleted, people lack the control needed to override deviant and retaliatory impulses (Thau & Mitchell, 2010). We therefore proposed the following:

Hypothesis 5: Reappraisal will moderate the within-person relation between significant work events and negative emotional reactions, such that relations will be weaker when employees report high (vs. low) use of reappraisal strategies.

Hypothesis 6: Suppression will moderate the within-person relation (i) between negative emotional reactions and CWB-O and (ii) between negative emotional reactions and CWB-P, such that relations will be stronger when employees report high (vs. low) use of suppression strategies.

We conducted a within-person, multi-level field study to test our emotion-based model of CWB. From the perspective of AET (Weiss & Cropanzano, 1996), we examine the relations among event-based fairness, negative emotional reactions, and the affect-driven behavior of CWB. From the perspective of the emotion-centered model of CWB (Spector & Fox, 2002), we test the model at the within-person level, where daily negative significant work events are construed as stressors. Finally, we introduce emotion regulation strategies as boundary conditions in regard to the emergence of negative emotional reactions and CWB.

Method

Participants and procedure

Participants were 50 full-time computer software programmers from a variety of private sector small- and medium-sized enterprises housed in the techno-park of a Turkish university. The average age of participants was 28 years ($SD = 5.9$ years),

¹In order to examine the role of emotion regulation within our model, we focused on significant work events → negative emotional reactions → CWB relations rather than event-based fairness → negative emotional reactions → CWB relations. This is because Gross and John (2003) suggested that reappraisal and cognitive change take place after attention is deployed on a situation, which may alter the personal meaning an event has for the individual. Such cognitive change is expected to influence the emotional response attached to the event. Following this approach of emotion regulation theorizing, we focused on the significant work events → negative emotional reactions → CWB path in our study.

and 30 percent of respondents were women. The majority of employees had a bachelor's degree (52 percent), followed by a master's degree (32 percent) or vocational degree (14 percent). On average, participants worked for their present organization for 3.35 years ($SD = 4.42$). Eight percent of the respondents indicated performing their job on an individual basis, 16 percent indicated working as part of a team, and 76 percent indicated that their job included both individual and team work.

The current study utilized experience-sampling methodology via web-based diary surveys. Participants were recruited by announcements posted on billboards of the university techno-park. The announcement included information about the study, and interested individuals were instructed to contact the researchers via e-mail or phone. Following the suggestions of Green, Rafaeli, Bolger, Shrout, and Reis (2006) about ensuring compliance in diary research, two of the authors made face-to-face meetings with each participant candidate by visiting them at their workplace and communicating the purpose of the study and the importance of accurate responding. During these meetings, participants were assured that their responses would be kept confidential and used only for research purposes. Moreover, they were encouraged to participate in as many daily surveys as possible. Individuals who agreed to participate were then contacted via e-mail and instructed in detail about when and how to fill out the surveys. Out of 86 individuals expressing interest, 50 (58 percent) completed the study and received \$60 in exchange for participating.

Data on demographics and between-person variables were collected before the start of the daily surveys through a web-based questionnaire. Daily data were collected over 10 working days. For daily data collection, participants received an e-mail each day at 4:30 PM that listed their participant ID and a link to the online survey. Each daily survey included instructions about how to fill out the questionnaire. Every participant completed the initial survey, and we obtained 456 data points out of a maximum of 500 for the daily survey, which amounts to an average response of 9.1 days out of 10 ($SD = 1.7$) for each employee.

Measures

Significant work events

We assessed significant work events via open-ended questions. Our intention was to focus on work events that are important to individuals and relevant to their well-being, rather than trivial or regular work events. Therefore, participants were asked to describe a significant work event that they experienced on that day, which influenced them in either a positive or negative way. As follow-up questions, participants were asked to indicate who (e.g., colleague, supervisor, and customer) was involved in the work event and why the event was perceived as positive or negative. On the basis of the content analysis of reported significant work events, each event was coded as negative (−1) or positive (+1).

Event-based fairness perceptions

Event-based fairness perceptions were assessed using four items. The first item assessed the overall fairness of the work event via a 5-point Likert scale (1 = *highly unfair*; 2 = *unfair*; 3 = *moderately fair*; 4 = *fair*; 5 = *highly fair*). The remaining three items assessed the outcome, procedural, and interpersonal fairness of the work event. These items were adapted from Colquitt's (2001) organizational justice scale and were modified to reflect event-level fairness evaluations ("The outcome of the event was fair considering the effort I put in," "Organizational procedures related with the outcome of the event were fairly implemented," and "The person involved in the event treated me with respect and dignity"). Participants were asked to respond to only the fairness dimensions (i.e., distributive, procedural, and interactional) that they found to be relevant to the significant event. Participants responded to these three items via a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). Internal consistency of the scale for the within-person data was .90.

Negative emotional reactions

In order to keep the daily survey as short as possible, we used a limited set of the items from Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Scale. Participants indicated the extent to which they felt each emotion in response to the significant work events via a 5-point Likert scale (from 1 = *not at all* to 5 = *to a great extent*). Given the limitations on the amount of information that can be collected in a survey using experience-sampling methods (Beal & Weiss, 2003), our goal was to quickly capture emotional states in a manner that would best represent the emotional experiences associated with our conceptual model. From this set, we computed a three-item negative emotional reaction variable on the basis of the discrete emotions of anger, nervousness, and distress. These three items were chosen because they best represented emotions that are negative in hedonic tone and high in intensity, on the basis of Remington, Fabrigar, and Visser's (2000) meta-analysis. The internal consistency of the three-item measure was .80.

Counterproductive work behavior

We measured CWB using the 33-item checklist of Spector et al. (2006). The scale consists of harmful behaviors directed towards people (CWB-P; e.g., "Insulted someone about their job performance") or the organization (CWB-O; e.g., "I tried to look busy while doing nothing"). Spector and colleagues noted that "In most cases researchers combine a checklist of behaviors into a single index or at most two indices, distinguishing only between behaviors targeting the organization and those targeting persons in the organization" (2006, p. 447). This distinction between CWB-O and CWB-P was maintained in this study. Participants responded to the CWB items in a manner similar to the approach used by Dalal and colleagues (2009, pp. 1056–1057), in which they

altered the response options so that they simply asked whether respondents had or had not engaged in each behavior since the previous survey. Thus, our ... CWB scale scores were ordinal, with scores ranging from 0 (no item endorsed) to 6 (all six items endorsed).

In our case, we had an ordinal scale for each CWB category ranging from 0 to the maximum number of behaviors endorsed that day within each category.

Emotion regulation

We used Gross and John's (2003) 10-item Emotion Regulation Questionnaire to measure the emotion regulation strategies of suppression (four items; e.g., "I control my emotions by not expressing them") and reappraisal (six items; e.g., "I control my emotions by changing the way I think about the situation I'm in"). Participants rated the extent to which they generally use the strategy in question via a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The internal consistencies were .80 and .81 for suppression and reappraisal, respectively.

Data analysis strategy

Owing to the multi-level nature of our data (i.e., events within individuals), we used multi-level path analysis with MPLUS 6.12 (Muthén & Muthén, 2010) and maximum likelihood estimation to test the within-person effects of significant work events, event-based fairness perceptions, and negative emotional reactions on daily CWB ratings as well as the between-person cross-level moderating effects of emotion regulation strategies. For indexes of variance explained, we present a pseudo- R^2 ($\sim R^2$) statistic (Snijders & Bosker, 1999).

Following the suggestions of Ohly, Sonnentag, Niessen, and Zapf (2010) and Hofmann and Gavin (1998), we centered variables measured at the daily level (level 1) around each person's mean (centering within cluster or CWC) and grand-mean-centered the trait level variables (level 2). One benefit of CWC the level 1 predictors is that it "may be the most appropriate form of centering in situations in which the primary substantive interest involves a Level 1 (i.e., person level) predictor. The rationale for this suggestion follows from the fact that CWC removes all between-cluster variation from the predictor and yields a "pure" estimate of the pooled within-cluster (i.e., Level 1) regression coefficient"

(Enders & Tofghi, 2007, p. 128). Thus, CWC left our predictor (i.e., significant work events) uncorrelated with all level 2 variables including the emotion regulation variables and potential level 2 individual difference confounds (e.g., gender and personality), leaving only the pure intra-individual relation between work events and the other level 1 variables.

To test the within-person mediation hypotheses, we followed the recommendations of Preacher, Zyphur, and Zhang (2010) for modeling mediation in multi-level models. This approach has several advantages that are worth noting. For example, this approach estimates the covariances for level 1 random effects and indirect effects as well as the multiple paths that are elements of these indirect effects without conflating level 1 and level 2 relationships. Additionally, this approach allows for the simultaneous estimation method (Preacher & Hayes, 2004) of testing indirect effects rather than relying on causal steps procedures or piecemeal estimation techniques (e.g., hierarchical linear modeling) that potentially bias results because they do not estimate all parameters simultaneously when testing mediation (Wallace, Butts, Johnson, Stevens, & Smith, in press).

Results

Descriptive statistics and correlations are presented in Table 1. Between-individual correlations for level 1 variables were computed using individuals' aggregated scores. Scale reliabilities, which are presented along the diagonal, were calculated using the within-person data across 10 days with a sample size of 456.

Nature and frequency of significant work events

Before conducting tests of our hypotheses, the significant work events reported by participants were qualitatively examined. Two researchers independently content analyzed the daily significant work events. Specifically, each event was categorized and coded as either positive (+1) or negative (−1). Inter-rater agreement was high (Cohen's $\kappa = 0.93$).

Significant work events were also coded into general categories, relying on an affective events inventory developed in a previous study (Erol-Korkmaz, 2010). This framework was based on similar qualitative research (e.g., Basch & Fisher, 2000; Grandey et al., 2002) on affective work events. The affective events inventory consisted of five broad event categories for 62 affective work events (i.e., task-relevant work events, relations with the supervisor, relations with coworkers, relations with subordinates, and organizational policies). Both researchers used the affective events inventory as the frame of reference for assigning the reported events to broad event categories. Moreover, the researchers also considered accompanying open-ended follow-up questions indicating who (e.g., coworker, supervisor, and customer) was involved in the work event and why the event was perceived as positive

Table 1. Descriptive statistics, correlations, and reliabilities for the study variables.

Variable	Mean	SD	1	2	3	4	5	6	7
1. Reappraisal	3.54	0.58	.81						
2. Suppression	2.73	0.80	.16	.80					
3. Significant work events	−0.07	0.37	−.15	.06	—				
4. Event-based fairness perception	3.31	0.57	.18	−.01	.64**	.90			
5. Negative emotional reaction	1.88	0.54	−.12	−.22	−.42**	−.34*	.80		
6. CWB-O	0.49	0.69	−.10	.10	.04	−.21	.14	—	
7. CWB-P	0.13	0.25	−.09	.08	.20	−.04	.23	.56**	—

Note: $n = 50$ participants who provided 456 daily observations. Coefficient alphas are in bold and shown along the diagonal. Significant work events are coded as $-1 = \text{negative event}$ and $+1 = \text{positive event}$. Between-individual correlations for level 1 variables were computed using individuals' aggregated scores.

* $p < 0.05$; ** $p < 0.01$.

or negative. After independently coding each event, the researchers reviewed the coding together, and disagreements were resolved through discussion. This second coding process also had acceptable inter-rater agreement (Cohen's $\kappa = 0.79$).

All of the categories, except "relations with subordinates," were frequently used by coders. A majority of the disagreements between coders were on events that were not covered by the available event categories, and these events generally included a third party such as a customer, a family member, or an event that was experienced by a close coworker and then shared verbally with the participant. Such events were coded accordingly as "relations with customers," "family-work conflict," and "emotional contagion" by the researchers.

Out of 456 significant work events, 54 percent were negative events. In terms of the content of the significant work events, 34.5 percent involved work tasks or responsibilities (e.g., "Today I just completed a work task that I had been working on for a long time"), 28.5 percent involved relations with one's supervisor (e.g., "My supervisor criticized me and blamed me for poor performance"), 22.6 percent involved relations with one's coworkers (e.g., "I had to work together with a coworker I dislike"), 6.3 percent involved organizational policies (e.g., "We were informed that the pay raise we were expecting will not be realized"), 4.4 percent involved emotional contagion (e.g., "My coworker had trouble with her supervisor and she was so upset that I felt sorry for her"), and the rest involved relations with subordinates or customers, physical work environment conditions, or work-family conflict.

We also examined the frequency of significant work events that were accompanied by evaluations of fairness. Out of 456 significant work events, all of them were accompanied by overall fairness judgments, 350 (76.8 percent) involved distributive fairness, 319 (70 percent) involved procedural fairness, and 345 (75.7 percent) involved interactional fairness. On average, each individual rated 3.22 items out of four fairness-related items. These findings provide initial evidence that the focal work events were significant and intertwined with fairness.

Nature and frequency of counterproductive work behavior

In order to better understand the types of CWB that employees engaged in, such as CWB-O, CWB-P, and facets of CWB (abuse, production deviance, sabotage, theft, and withdrawal), we examined their average frequency and proportion on a daily basis. Average daily frequency of CWB-O (0.52; 33.8 percent of participants reported at least one) was much higher than that of CWB-P (0.14; 10.3 percent). These findings are similar to those reported by Yang and Diefendorff (2009). Regarding specific facets, withdrawal (0.39; 28.9 percent) behaviors were most frequent, followed by abuse (0.13; 9.6 percent), production deviance (0.07; 6.6 percent), sabotage (0.01; 1.3 percent), and theft (0.01; 1.3 percent). In terms of specific items, "Taken a longer break than I was allowed to," "Came to work late without permission," and "Ignored someone at work" were the most frequent (22.1, 12.9, and 5.7 percent respectively) (the first two items represent withdrawal behaviors, and the latter item represents abusive behavior).

Tests of the hypotheses

We first examined the within-person and between-person variances in daily significant work events, event-based fairness perceptions, negative emotional reactions, CWB-O, and CWB-P (Table 2). The ratio of within-person variance to overall variance was 94.0 percent for significant work events, 85.3 percent for event-based fairness perception, 76.7 percent for negative emotional reactions to work events, 44.2 percent for CWB-O, and 78.3 percent for CWB-P. These ratios indicate that the majority of variance in the study variables was within person rather than between person, justifying the use of a multi-level approach in the current study.

Within-person relations

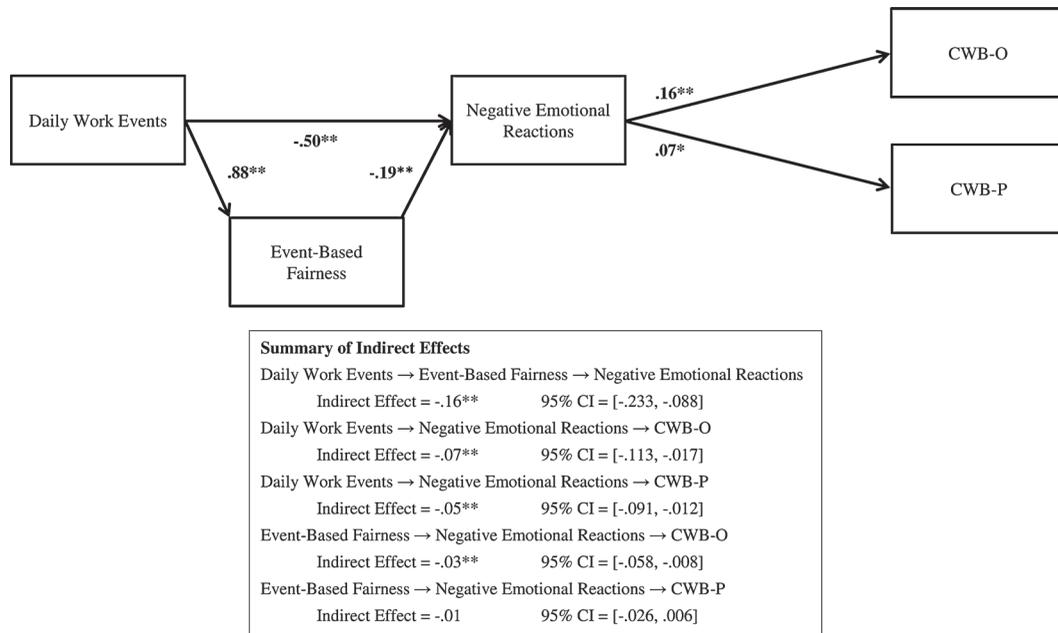
An initial fixed effects model was specified in order to assess the fit of our hypothesized within-person relations. Results of this fixed effects model indicated that our within-person model fit the data well as $\chi^2(4) = 6.165$ (*ns*), *CFI* = 0.995, *RMSEA* = 0.035, and within-units *SRMR* (*SRMR-within*) = 0.021.

Table 2. Parameter estimates and variance components of null models for all focal level 1 variables.

Variable	Intercept (γ_{00})	Within-individual variance (ρ^2)	Between-individual variance (τ_{00})	Percentage of variability within-individual
Significant work events	-0.07	0.79**	0.05 [†]	94.0
Event-based fairness perception	3.31**	1.16**	0.20**	85.3
Negative emotional reaction	1.88**	0.69**	0.21**	76.7
CWB-O	0.49**	0.34**	0.43**	44.2
CWB-P	0.14**	0.18**	0.05**	78.3

Note: γ_{00} = pooled intercept representing the average level of dependent variable across individuals; ρ^2 = within-individual variance in the dependent variable; τ_{00} = between-individual variance in the dependent variable. Percentage of variability within-individual was computed as $\rho^2 / (\rho^2 + \tau_{00})$.
[†] $p < 0.10$; ** $p < 0.01$.

The multi-level path analysis testing the within-person relationships among event-based fairness perceptions, negative emotional reactions, and daily CWB is presented in Figure 2. Hypothesis 1 predicted that event-based fairness perceptions would partially mediate the negative association between significant work events (where high and low scores indicate positive and negative events, respectively) and negative emotional reactions such that significant work events would have both (i) a direct negative effect and (ii) an indirect negative effect (via event-based fairness perceptions) on negative emotional reactions. In support of this hypothesis, the path model results indicated that significant work events had a negative direct relation with negative emotional reactions ($\gamma = -0.50, p < .01$) and a negative indirect relation with negative emotional reactions through event-based fairness perceptions (estimate of indirect effect = $-0.16, p < 0.01, 95\% CI = -0.233, -0.088$). The within-individual variance explained (i.e., $\sim R^2$) in negative emotional reactions was 59.2 percent.



Note. Level-2 n=50. Level-1 n = 456. All exogenous Level-1 variables were group-mean centered.
 * $p < .05$ ** $p < .01$.

Figure 2. Multi-level path analysis results of within-person relationships

Hypothesis 2 proposed that negative emotional reactions to work events would be positively related to (i) daily CWB-O and (ii) daily CWB-P. Consistent with our prediction, the path model results indicated that negative emotional reactions were positively associated with CWB-O ($\gamma=0.16, p < 0.01$) and CWB-P ($\gamma=0.07, p < 0.05$).² The within-individual variance explained (i.e., $\sim R^2$) in CWB-O and CWB-P was 15.4 percent and 13.6 percent, respectively.

Hypothesis 3 posited that negative emotional reactions to significant work events would mediate (i) the negative relationship between significant work events (where high and low scores indicate positive and negative events, respectively) and daily CWB-O and (ii) the negative relationship between significant work events (where high and low scores indicate positive and negative events, respectively) and daily CWB-P. In support of this hypothesis, negative emotional reactions mediated the effects between significant work events and daily CWB-O (estimate of indirect effect = $-0.07, p < 0.01, 95\% \text{ CI} = -0.113, -0.017$) as well as daily CWB-P (estimate of indirect effect = $-0.05, p < 0.01, 95\% \text{ CI} = -0.091, -0.012$).

Hypothesis 4 predicted that negative emotional reactions to significant work events would mediate (i) the negative relationship between event-based fairness perceptions and daily CWB-O and (ii) the negative relationship between event-based fairness perceptions and daily CWB-P. A negative indirect relationship was supported for the event-based fairness \rightarrow negative emotional reactions \rightarrow daily CWB-O link (estimate of indirect effect = $-0.03, p < 0.01, 95\% \text{ CI} = -0.058, -0.008$). However, a negative indirect relationship was not supported for the event-based fairness \rightarrow negative emotional reactions \rightarrow daily CWB-P link (estimate of indirect effect = $-0.01, ns, 95\% \text{ CI} = -0.026, 0.006$). Thus, Hypothesis 4 was partially supported.

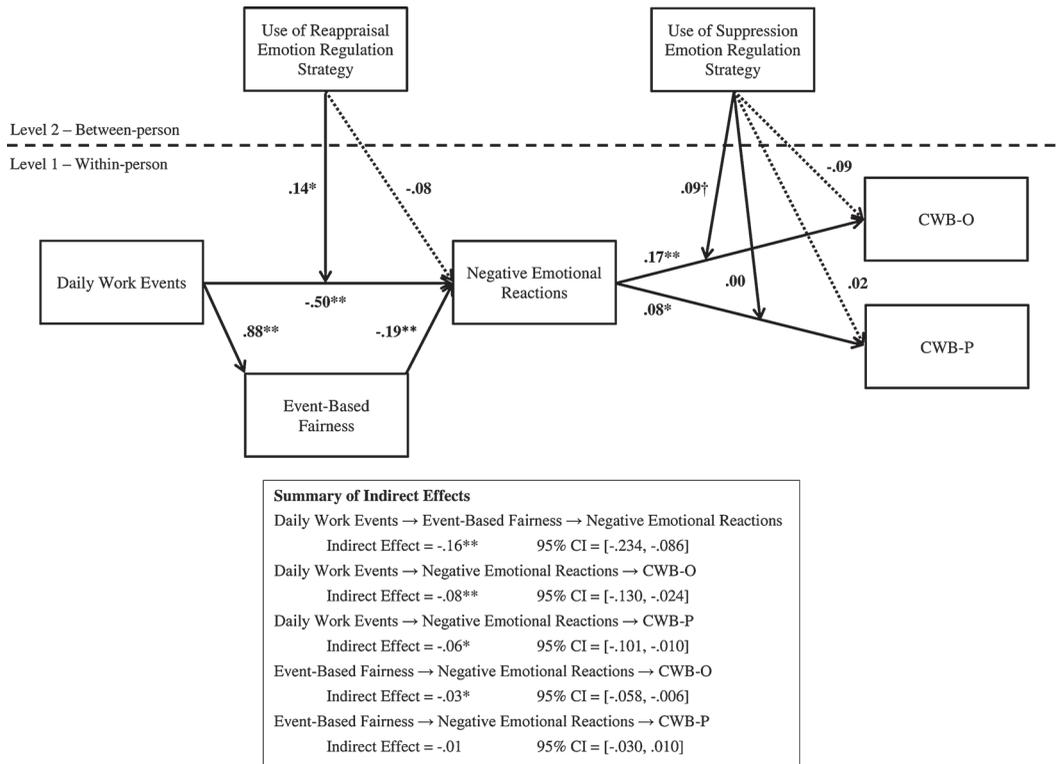
Cross-level effects

The results of the multi-level path analysis testing the cross-level moderating effects of reappraisal and suppression on the within-person relationships among event-based fairness, negative emotional reactions, and daily CWB are presented in Figure 3. The model that included the cross-level moderators resulted in no substantive changes in regard to the within-individual relationships tested previously. Hypothesis 5 predicted that reappraisal would moderate the within-person relationship between significant work events and negative emotional reactions, such that relations would be weaker when employees report high (vs. low) use of reappraisal strategies. As shown in Figure 3, the path model results indicated that between-individual variability in reappraisal predicted the within-individual random slope between significant work events and negative emotional reactions ($\gamma=0.14, p < 0.05$).³ To explore the form of this cross-level interaction, we plotted it at conditional values of reappraisal (+1 and -1 standard deviations; Cohen, Cohen, West, & Aiken, 2003). Figure 4 presents the plot of this interaction and shows that, as predicted, the relationship between significant work events and negative emotional reactions was weaker for those high in use of reappraisal strategies and stronger for those low in use of reappraisal strategies. This cross-level interaction explained 11.6 percent of the variability in the random slope between significant work events and negative emotional reactions.

Finally, Hypothesis 6 predicted that suppression would moderate the within-person relation (i) between negative emotional reactions and CWB-O and (ii) between negative emotional reactions and CWB-P, such that relations would be stronger when employees report high (vs. low) use of suppression strategies. As shown in Figure 3, the path model results indicated marginal support for suppression predicting the within-individual random slope between negative emotional reactions and CWB-O ($\gamma=0.09, p < 0.10$) but no support for suppression predicting the within-individual random slope between negative emotional reactions and CWB-P ($\gamma=0.00, ns$). Figure 5

²In addition to same-day relations of negative emotional reactions with CWB, it is also possible that employees may engage in retaliatory behavior on some later day. In order to explore this idea, we conducted cross-lagged analyses to test whether negative emotional reactions on 1 day predicted CWB on subsequent days (up to 1 week later). However, none of the cross-lagged analyses revealed significant results.

³Additional analyses testing the potential moderating effects of suppression strategies on the link between significant work events and negative emotional reactions did not, as expected, result in a significant interaction. As one reviewer pointed out, cognitive reappraisal may potentially influence the recall of events such that those who use cognitive reappraisal strategy may recall less negative events because the events have been reappraised as less negative. Thus, we also reran our multi-level path analysis without group-mean centering significant work events so that we would test the assertion that cognitive reappraisal predicts variance in significant work events. This contention was not supported as cognitive reappraisal was not associated with significant work events and the analysis resulted in no substantive differences in results.



Note. Level-2 n=50. Level-1 n = 456. All exogenous Level-1 variables were group-mean centered; all exogenous Level-2 variables were grand-mean centered. † p < .10 * p < .05 ** p < .01.

Figure 3. Multi-level path analysis result of within-person relationships and between-person cross-level moderators

presents the plot of the interaction predicting CWB-O and shows that, as predicted, the relationship between negative emotional reactions and CWB-O was stronger for those high in use of suppression strategies and weaker for those low in use of suppression strategies. This cross-level interaction explained 16.7 percent of the variability in the random slope between negative emotional reactions and CWB-O.⁴

Supplemental analyses

Additional analyses were conducted in order to leverage the information gathered from the qualitative data regarding significant work events. Using this information, we examined whether the type of work event influenced the strength of relations between significant work events and negative emotional reactions. To do so, we conducted four regression analyses for testing the interactional effects (Cohen et al., 2003) of significant work events with event category (i.e., task-related events, supervisor-related events, and coworker-related events) in predicting negative emotional reactions.⁵ The first analysis compared task-related events with supervisor-related events (task-related

⁴Additional analyses testing the potential moderating effects of reappraisal strategies on the link between negative emotional reactions and CWB-O and CWB-P did not, as expected, result in any significant interactions. Reappraisal and suppression strategies were also not found to moderate the link between work events and fairness perceptions.

⁵Full results for the supplemental analyses including tables are available upon request from the first author.

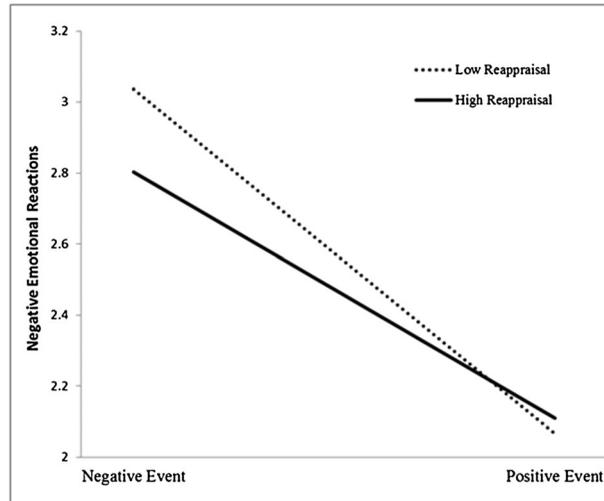


Figure 4. Cross-level moderating effect of reappraisal on the relation between daily significant work events and negative emotional reactions

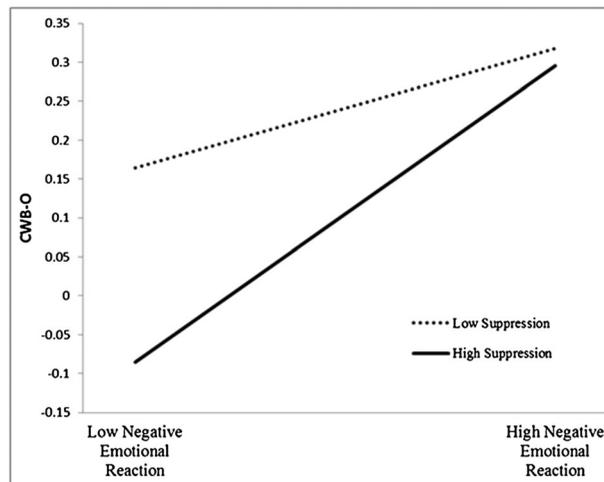


Figure 5. Cross-level moderating effect of suppression on the relation between daily negative emotional reactions and organizationally targeted CWB

events coded as 0, supervisor-related events coded as 1, and all other events omitted). The second analysis compared supervisor-related events with coworker-related events (supervisor-related events coded as 0, coworker-related events coded as 1, and all other events omitted). The third analysis compared task-related events with coworker-related events (task-related events coded as 0, coworker-related events coded as 1, and all other events omitted). The final analysis used the full sample and compared each event category (i.e., task-related events, supervisor-related events, and coworker-related events) with events outside of those three categories.

The interaction terms between the event type dummy codes and significant work events were significant in the first regression (contrasting task-related and supervisor-related events), marginally significant in the second regression (contrasting supervisor-related and coworker-related events), and not significant in the third regression

(contrasting task-related and coworker-related events). The first moderation model explained 46 percent of the variance in negative emotional reactions (1 percent owing to the interaction term), the second moderation model explained 49 percent of the variance in negative emotional reactions (1 percent owing to the interaction term), and the third moderation model explained 39 percent of the variance in negative emotional reactions (0 percent owing to the interaction term). The nature of the significant interactions is illustrated in Figures 6 and 7. The form of the interactions indicates that the negative relationship between significant work events and negative emotional reactions was stronger for supervisor-related events in comparison with task- and coworker-related events.

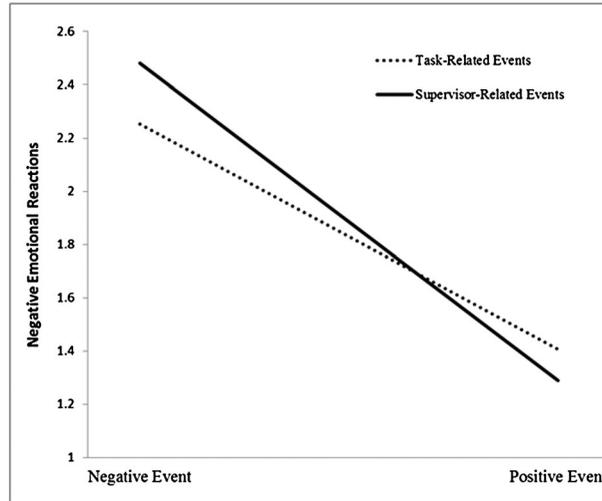


Figure 6. Moderating effect of event category (comparing task-related events with supervisor-related events) on the relation between significant work events and negative emotional reactions

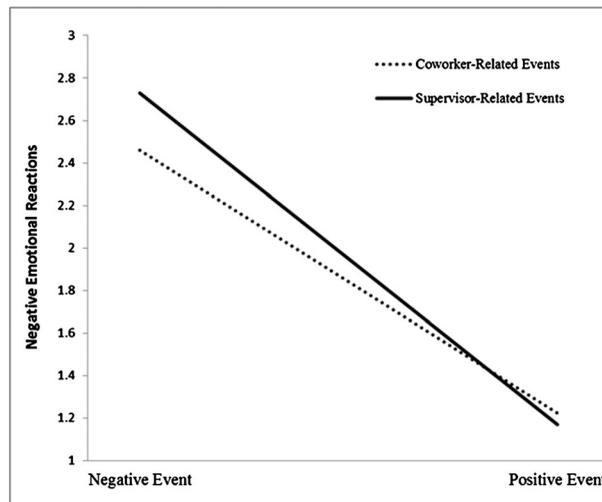


Figure 7. Moderating effect of event category (comparing supervisor-related events with coworker-related events) on the relation between significant work events and negative emotional reactions

The results of the fourth analysis using the full sample and all event categories (i.e., task-related events, supervisor-related events, coworker-related events, and “other” events) revealed that only the interaction term for supervisor-related events was significant. The model explained 41 percent of the variance in negative emotional reactions (1 percent owing to the interaction terms). Therefore, only supervisor-related events differed significantly from the “other” events category. The nature of the significant interaction is illustrated in Figure 8 and indicates that the negative relationship between significant work events and negative emotional reactions was stronger for supervisor-related events in comparison with “other” events. In sum, these supplementary findings consistently demonstrated that employees reported greater levels of negative emotional reactions in response to negative work events arising from interactions with supervisors compared with events involving interactions with coworkers, events involving task responsibilities, and all other events that occurred in the workplace.

Discussion

Drawing on AET (Weiss & Cropanzano, 1996) and the emotion-centered model of voluntary work behavior (Fox et al., 2001), the present research tested an integrative model elucidating the process through which specific significant work events elicit fairness evaluations, negative emotional reactions, and in turn daily CWB. The model also integrated the emotion regulation strategies of reappraisal and suppression as person-level factors influencing the within-individual relations. The model was largely supported as significant work events had both direct and indirect influences (via event-based fairness) on negative emotional reactions of employees. Support for mediation was found such that negative emotional reactions accounted for the relation between significant work events and both forms of CWB as well as between event-based fairness perceptions and daily CWB-O. Thus, unfavorable events, unfairness, and negative emotional reactions were all indirectly or directly associated with higher levels of CWB. In terms of the cross-level moderating roles of the person-level factors, support was shown for the buffering role of reappraisal on the relationship between significant work events and negative emotional reactions. In other words, employees who generally change the way they

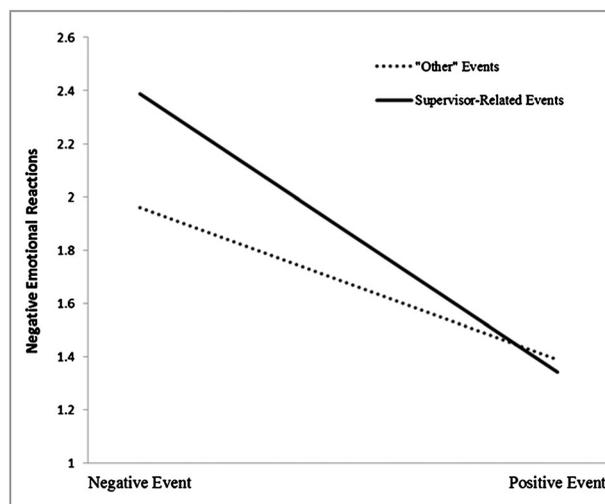


Figure 8. Moderating effect of event category (comparing “other” events with supervisor-related events) on the relation between significant work events and negative emotional reactions

think about work events/situations reacted less negatively to unfavorable work events. Little support, however, was found for the augmenting effect of suppression on the link between negative emotional reactions and CWB.

Our study contributes to the CWB literature in several ways. First, it answered calls to explore the specific events that precipitate intra-individual fluctuations in CWB rather than general perceptions of workplace stressors (e.g., interpersonal justice; Judge et al., 2006; Yang & Diefendorff, 2009). By beginning our investigation with significant work events and assessing the fairness, negative emotional reactions, and CWB elicited by these events, our study investigated the *events* in AET and the emotion-centered model of voluntary work behavior that have been omitted in past intra-individual CWB research.

In addition to allowing for a more complete test of AET and the emotion-centered model, the examination of events allowed us to content analyze employees' narratives of positive and negative significant events at work. This analysis revealed that work tasks and responsibilities, supervisor relations, and coworker relations were the most common themes, accounting for a total of 85.6 percent of all reported significant work events. These findings are consistent with the themes that have emerged in other qualitative studies (e.g., Basch & Fisher, 2000; Grandey et al., 2002) and also parallel the facets included in various measures of job satisfaction (e.g., Spector's, 1985, Job Satisfaction Survey). This overlap suggests that our study was effective in capturing a realistic portrayal of participants' daily work experiences. Further, our supplemental analyses of these event categories revealed that significant work events arising from interactions with supervisors elicited greater negative emotional reactions in comparison with events involving tasks, coworkers, or any other type.

Another contribution of the present study is that it provides empirical evidence for the cognitive appraisal model of organizational justice (Cropanzano, Weiss, Suckow, & Grandey, 2000). Our model highlights the parallels between event-based justice appraisals and emotional appraisals. In both cases, a two-stage appraisal procedure (primary and secondary appraisal) is believed to occur, in which the first stage primes the global direction of the emotional response, and the second stage provides meaning and differentiation for the resulting emotion. Integration of justice and emotional appraisals asserts that the outcome of an event determines the general valence of the emotional experience, whereas perceptions of procedural and interpersonal fairness influence the specific emotional reaction to the event. In this regard, by integrating qualitative and quantitative research methods, our study included all of the components of the appraisal process: the assessment of significant work events (initiator of the appraisal process), fairness appraisals of these events (stage 1), and the negative emotional reactions to the events (stage 2). Analysis of the within-persons associations provided support for both justice and emotional appraisal models.

Our research also answered calls to investigate the interplay of person-level factors with situational factors in influencing intra-individual variability in affect and behavior at work (Judge et al., 2006). Our demonstration of the person-level usage of reappraisal as a buffer of effects on negative emotional reactions and ultimately CWB complements other examples of person-level variables that have been shown to moderate relations with CWB, such as trait hostility, negative affectivity, and conscientiousness (e.g., Judge et al., 2006; Yang & Diefendorff, 2009). Our findings suggest that employees who generally use reappraisal strategies are better at coping with stressful work events and are able to help maintain a positive affective tone in the organization. This finding is in line with Gross and John's (2003) proposal that reappraisal is a more effective emotion regulation strategy that promotes increased levels of psychological well-being. Establishing boundary conditions such as the use of reappraisal strategies are critical to understanding why CWB emerges and how the type and intensity of such behavior is constrained.

There are a few explanations that may account for the lack of support for the moderating role of suppression (i.e., the interaction was marginally significant for CWB-O and not significant for CWB-P). One reason may be the range restriction and low base rate of CWB. Field studies are often disadvantaged in their ability to detect interactions owing to inefficient design and differences in measurement error (McClelland & Judd, 1993). Therefore, the range restriction and low base rates in CWB along with the measurement error associated with field studies may have hampered our ability to detect the hypothesized interaction. We believe that the empirical evidence in our descriptive data and analysis provides suggestive evidence for this contention as the interaction was marginally supported for CWB-O (which had a higher mean and greater variability) but not CWB-P (which had a lower mean and less variability).

The lack of support for the moderating effect of suppression might also be due to how CWB is perceived by employees. For example, suppression involves inhibiting emotion-expressive behavior (Gross, 1998b), and CWB is often viewed as an emotion-based behavioral response (e.g., Fox & Spector, 1999). Therefore, certain forms of CWB may be viewed by chronic suppressors as emotion-expressive behavior, leading them to actually suppress these emotion-based behavioral responses to negative emotions. Thus, even though we argued that suppression would enhance the link between negative emotions and CWB because of its ineffectiveness as a coping mechanism (Gross & John, 2003) and because it decreases employee's self-regulatory resources to override deviant and retaliatory impulses (Thau & Mitchell, 2010), there may be more to this story such as the suppression of CWB by chronic suppressors in response to negative emotions.

In regard to finding some support for the moderating role of suppression for CWB-O and not CWB-P, research on individual difference variables accompanying emotion regulation strategies shows that suppressors tend to avoid experiences (Kashdan, Barrios, Forsyth, & Steger, 2006) and report rumination and depressive/anxiety-related symptoms more frequently (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Thus, suppressors may be more likely to withdraw from the situation (reflecting in increased CWB-O) and avoid confronting other people (reflecting in no changes to CWB-P) in response to negative emotional experiences. In other words, suppressors might use CWB as a way of distancing oneself from the situation rather than as a social exchange mechanism.

Considering the model as a whole, results for both the within-individual relations and the cross-level moderators were mostly supported for CWB-O but tended to be unsupported for CWB-P. This finding was surprising to us as we did not predict differential effects across CWB-O and CWB-P. However, this type of finding is not uncommon in CWB studies. For example, Yang and Diefendorff (2009) found that customer interpersonal injustice related to CWB-O but not to CWB-P even though interpersonal injustice is usually attributed to people and not organizations. We believe that there are a couple reasons beyond range restriction and base rates that may explain the relatively stronger results for CWB-O vis-à-vis CWB-P. First, perhaps negative work events are attributed to the organization regardless of how they are categorized; thus, employees target their CWB in kind. After all, supervisors are agents of the organization, and employees view their interactions with the supervisor as indicative of the organization's support for them (e.g., Eisenberger, Huntington, Hutchison, & Sowa, 1986). Interpersonal injustice can also be attributed to the organization when employees believe that the context contributes to unfair experiences (Yang & Diefendorff, 2009). Second, perhaps CWB-O is perceived as less risky in comparison with CWB-P in terms of potential future negative workplace events because CWB-P is more visible and more likely to be reciprocated by other employees. This contention is consistent with research by Fox, Spector, Goh, and Bruursema (2007), which demonstrates that employee self-reports and coworker reports of CWB converge for CWB-P but not for CWB-O. The authors specifically argue that this may be due to the differing nature of CWB targeting persons and organizations, the first being more visible (and thus more risky), whereas the latter is less visible (and thus less risky).

Implications for practice

Our findings have practical implications for managers who are seeking to decrease the occurrence of CWB in their organizations. For example, our supplemental analyses revealed that negative significant work events involving supervisor interactions resulted in the highest levels of anger, distress, and nervousness, possibly because the actions and language of supervisors are especially salient in work contexts and supervisors are a primary source (or obstacle) of need satisfaction for employees (Yukl, 2010). Additionally, in comparison with other categories of significant work events (e.g., task-related or coworker-related), employees might perceive having less control over the situation when interacting with supervisors, which likely exacerbates the negative effects on employee well-being. In line with this idea, previous research has concluded that employees perceive problem-focused coping strategies as more effective in high-control stressful episodes (Bowman & Stern, 1995). Our findings are another example of how the quality of supervisor-subordinate relations is critical for subordinate well-being (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997). Supervisors have extensive influence on the affective experiences

of their subordinates, and they can elicit positive emotions by being supportive of their employees, by recognizing their accomplishments, and by communicating clear and challenging goals.

Given the observed ties between justice and emotion, supervisors can also elicit positive emotions and mitigate negative emotions by allocating resources equitably, applying organizational procedures consistently and without bias, and treating subordinates with respect and dignity. Further, organizations interested in decreasing the occurrence of CWB should insist that supervisors adhere to these justice rules (Scott, Colquitt, & Paddock, 2009). There exist several helpful examples for how fair policies can be implemented in organizational settings (e.g., Cropanzano, Bowen, & Gilliland, 2007; Greenberg, 1990; Skarlicki & Latham, 1997). To be properly implemented, however, these policies should be coupled with negative consequences when supervisors do not adhere to the justice rules. For example, justice rule adherence could be included as a performance criterion on 360-degree performance appraisals.

Another practical contribution of our findings is that they highlight the important role of emotion regulation strategies during the process by which work events are translated into emotional reactions. Considering the buffering effects of reappraisal strategy on the relation between significant work events and negative emotions, our results provide cues for managers regarding which employees are less likely to withdraw or retaliate against the organization. Research indicates that habitual reappraisers experience greater positive emotion and report greater interpersonal functioning, coping, and psychological well-being (Gross & John, 2003). Although it may be difficult for managers to influence their subordinates' tendencies to use reappraisal strategies, they can be aware of the types of employees who are able to change their perspective and respond to events in positive ways.

For employees, our results suggest that emotion regulation can help cope with work stress and mitigate negative emotions experienced at work. Although the literature does support stable between-individual differences in emotion regulation strategies (e.g., Gross & John, 2003; John & Gross, 2004; Liu et al., 2010), experimental research also demonstrates that emotion regulation strategies can be unlearned or developed through training and coaching as it is possible to prime participants' use of emotion regulation strategies (e.g., Gross, 1998a; Gross & Levenson, 1997; Richards & Gross, 2000). Thus, employees may benefit from seeking training to become aware of emotional reactions and their sources in order to learn to reappraise situations in ways that result in positive feelings. Relatedly, research on stress management practices has proved to be beneficial for employee well-being (Munz, Kohler, & Greenberg, 2001; Murphy & Sorenson, 1988) and may aid employees in reappraising work events. Thus, employees can follow stress management practices such as self-training mindfulness, which can help them to become aware of their thoughts and feelings with an accepting and nonjudgmental attitude (Hülshager, Alberts, Feinholdt, & Langer, 2013).

Contrary to the positive effects of the reappraisal strategy in the short run, we are unaware of potential detrimental effects in the long run. For example, reappraisal might perpetuate some forms of interpersonal mistreatment if employees continuously reappraise such treatment in a positive light, rather than take action by confronting the source. Thus, it is essential that the reappraisal of a situation should not become a practice of self-delusion but rather should be a practice of taking the situation as it is and eliminating distracting thoughts and feelings induced by stress. In the latter case, reappraisal may be especially helpful in that it enables employees to confront challenging situations without emotional reactivity.

Limitations and directions for future research

Although our study possesses a number of strengths (e.g., use of experience-sampling methodology in a field context, cross-level moderator effects, and a mix of quantitative and qualitative data), there are some limitations. One limitation pertains to the correlational nature of our data, which limits us from drawing causal inferences among study variables. We relied on AET (Weiss & Cropanzano, 1996) and the emotion-centered model (Spector & Fox, 2002) when specifying the sequence of variables included in our empirical model. Moreover, in phrasing our survey questions, we indicated the direction of causality for some variables (e.g., "To what extent did you feel each of the emotions below in response to the particular significant work event you reported above"). However, alternative routes of causal relations may explain some of the effects. For example, employees exhibiting CWB may perceive

the workplace as threatening and may attend to only negative events at work. Despite such alternative explanations, consistency of our findings with theory is believed to engender confidence in the tested associations.

Another potential limitation is that we only considered emotion regulation strategies at the between-individual level. We took this approach because our research question centered on the moderating role of each person's general emotional regulation tendency for both reappraisal and suppression (i.e., between-individual) on the daily relationships among significant work events, fairness, negative emotions, and CWB (i.e., within-individual). Additionally, this type of approach is consistent with past research (e.g., Gross & John, 2003; John & Gross, 2004; Liu et al., 2010) as "individuals differ in their use of suppression and reappraisal ... [and] these individual differences are substantial and meaningful" (Gross & John, 2003, p. 360). However, intra-individual fluctuations in emotion regulation may exist and could potentially be due to specific events that occur in the workplace. Thus, future research could extend our findings by exploring the interplay between significant work events and daily fluctuations in emotion regulation strategies.

The third limitation is our dichotomous measure of daily CWB, which may have reduced the power to detect significant relationships. Although the items were aggregated into a linear composite, our measure of CWB represents an overall measure of absence/occurrence of CWB rather than intensity of CWB. Future research might assess the latter form of CWB because strong negative emotional reactions may increase not only the likelihood of CWB but also the severity and intensity of such behavior.

A fourth potential limitation is the restricted generalizability of study findings due to the sample characteristics. The sample used in this study reflected a young work force that consisted of computer software programmers working in small, creativity-driven companies. The majority of the participants held at least a bachelor's degree and worked both individually and as part of project teams while performing their daily work activities. According to O*NET, the work activities of computer programmers mainly consist of interacting with computers, making decisions and solving technical problems, creative thinking, and working with data and information. Therefore, future research that examines other employee populations to verify the external validity of our findings is warranted. In fact, for occupations that involve higher amounts of interpersonal interactions (e.g., service jobs), the content of typical work events might differ and even stronger associations among events, negative emotional reactions, and employee behavior may be observed. Although the most frequently reported type of CWB in the current study included withdrawal behavior, CWB-P might emerge as the more frequent retaliatory behavior for more relationship-intense occupations such as office clerks, sales personnel, nurses, and teachers.

A final limitation of our study is that all variables were self-reported even though they were assessed over time. That said, we believe that self-reports were the most appropriate method for assessing our focal variables. All of the predictors (i.e., significant work events, event-based fairness, and negative emotional reactions) were within-individual internal perceptions and our cross-level moderators referred to the internal emotion regulation strategies utilized by each individual. Thus, we considered the trade-off between the potential for self-reporters under-reporting their CWB or the potential for other raters not having the opportunity to observe CWB. We chose to use self-reports as Berry, Carpenter, and Barratt's (2012, pp. 623–624) recent meta-analysis concluded that

self-raters reported engaging in more CWB than other-raters reported them engaging in. Thus, the idea that self-raters will underreport their engagement in CWB was not supported in the present meta-analysis—at least not in comparison to other-raters. However, the common concern that other-raters do not have adequate opportunity to observe employees engaging in CWB (and especially CWB-O), and therefore underreport employees' CWB, was supported by the mean difference results of the present meta-analysis.

Thus, this evidence combined with the historically low base rate of CWB led us to choose self-reports.

In terms of other directions for future research, researchers could explore the moderating role of emotion regulation strategies on positive emotional reactions to work events as this study focused solely on negative emotional reactions. Indeed, Côté (2005) proposed that regulating positive emotions may have effects that are unique from regulating negative emotions. Researchers could also consider an alternative approach in studying emotional reactions by focusing on discrete emotions. Mapping work events associated with particular discrete emotions would be

useful in understanding the true nature and meaning of emotions at work. Multi-level research could also be conducted, where individuals within work units are assessed across multiple occasions, enabling tests of the relations between justice climate, emotional climate, and individual employee work behaviors.

In the current study, fairness perceptions were tested as the mechanism linking significant work events to negative emotional reactions. Future research can investigate alternative mechanisms of this process. For example, psychological needs fulfillment or frustration might mediate the relationships between significant work events and negative emotional reactions. Self-determination theory (Deci & Ryan, 2012) emphasizes autonomy, competency, and relatedness as universal psychological needs that, when satisfied, produce intrinsic motivation. Future research can enlighten whether the effects of different categories of significant work events are mediated by different psychological needs. Competency and autonomy might be relevant for significant work events involving work tasks and responsibilities, whereas relatedness might be relevant for events involving supervisor and coworker relations. These and other directions are possible when a within-person perspective on significant work events, emotions, and behavior is adopted, as we did in the present study.

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