

HOW OTHER- AND SELF-COMPASSION REDUCE BURNOUT THROUGH RESOURCE REPLENISHMENT

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The average employee feels burnt out, a multidimensional state of depletion likely to persist without intervention. In this paper, we consider compassion as an agentic action by which employees may replenish their own depleted resources and thereby recover. We draw on conservation of resources theory to examine the resource-generating power of two distinct expressions of compassion (self- and other-directed) on three dimensions of burnout (exhaustion, cynicism, inefficacy). Utilizing two complementary designs—a longitudinal field survey of 130 social service providers and an experiential sampling methodology with 100 business students across 10 days—we find a complex pattern of results indicating that both compassion expressions have the potential to generate salutogenic resources (self-control, belonging, self-esteem) that replenish different dimensions of burnout. Specifically, self-compassion remedies exhaustion and other-compassion remedies cynicism—directly or indirectly through resources—while the effects of self- and other-compassion on inefficacy vary. Our key takeaway is that compassion can indeed contribute to human sustainability in organizations, but only when the type of compassion provided generates resources that fit the idiosyncratic experience of burnout.

“Whenever the topic of job burnout gets raised, the key question is ‘What can we do about it?’” (Maslach, 2017: 143)

The World Health Organization (2019) recently added burnout to its international classification of diseases that significantly impair health. In the United States, more than half of employees report such burnout (Gallup, 2018), described as a multidimensional state of depletion negatively related to performance and commitment (for meta-analyses, see Lee & Ashforth, 1996; Swider & Zimmerman, 2010). Left unchecked, burnout persists over time (Maslach, 2017), resulting in an estimated \$109 billion in annual U.S. health-related consequences (Garton,

2017) including diabetes, heart disease, and premature death (Alarcon, 2011).

These deleterious consequences make understanding potential recovery mechanisms for addressing burnout of vital importance. To date, remedies have largely focused on passive activities that treat those experiencing burnout as the object of, rather than an active participant in, their own recovery. Burnout scholars have advocated for organizational interventions that lessen work demands or increase social support from others (Maslach, 2017). Meanwhile, the organizational recovery literature has prioritized reprieve from work through psychological detachment, sleep, vacations, or breaks (Sonnentag, Venz, & Casper, 2017; Trougakos, Beal, Green, & Weiss, 2008). It is somewhat paradoxical, however, that, although a persistent assumption about burnout is that “the problem lies within the person” (Maslach, 2003: 191), scholars also suggest that “chronically burned-out employees or those at risk for burnout need help from others in order to change” (Bakker & Costa, 2014: 117).

Taking our inspiration from conceptual work that argues individuals can play an agentic role in their own recovery, and that acts of care may be one such pathway (Lilius, 2012), our guiding research question is: *When can compassionate action reduce an actor’s own burnout?* Building on conservation of resources theory principles (COR; Hobfoll, 1989) that employees

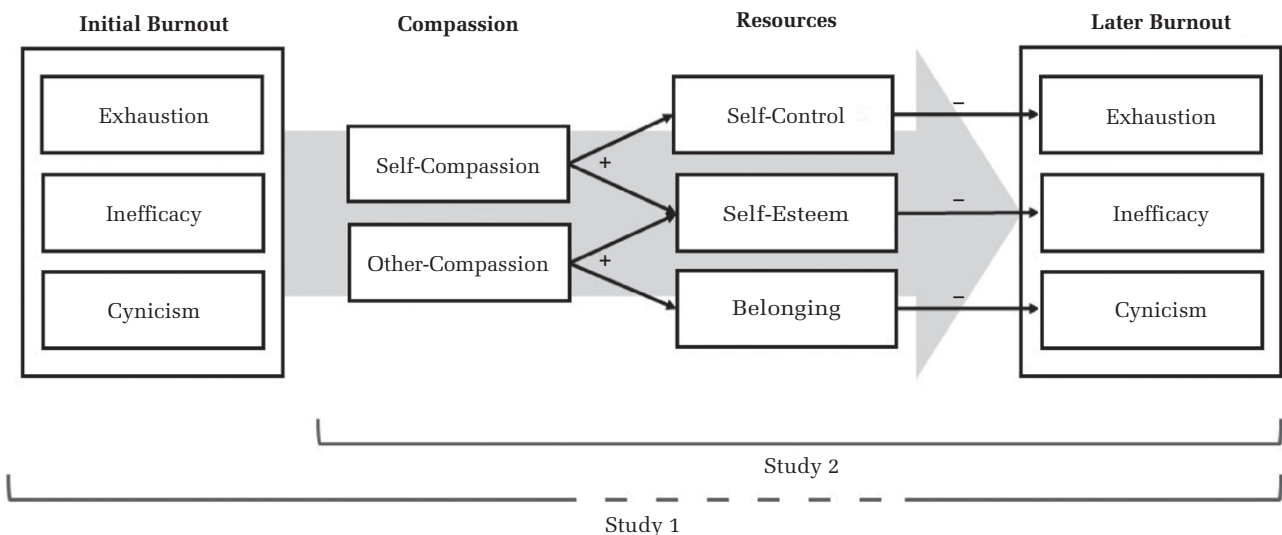
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must combat resource loss by engaging in replenishing activities, we propose that compassion is most restorative when its particular expression generates the very resources depleted by burnout. We consider this compassion–burnout alignment by attending to the multidimensional nature of the burnout experience—comprising exhaustion, cynicism, and inefficacy—and the variety of resource categories that compassionate acts might generate (energies, conditions, attributes). Specifically, we hypothesize that self-compassion can remedy exhaustion by increasing self-control (a type of energy resource), other-compassion can remedy cynicism by fostering a sense of belonging (a type of condition resource), and both can remedy inefficacy by increasing self-esteem (a type of personal attribute resource). We test our model (see Figure 1, below) across two complementary samples (full-time social service providers vs. business school students) and two experiences of burnout (chronic vs. acute). We also utilize two distinct methodologies (a longitudinal field survey and an experiential sampling methodology) in order to provide a robust exploration of this important phenomenon. Our results highlight a complex pattern of relationships between compassion, resources, and burnout such that self-compassion reduces exhaustion and other-compassion reduces cynicism—directly in Study 1 and indirectly in Study 2—while the effects of self- and other-compassion on inefficacy are more varied.

Our work offers a number of important insights for research on burnout. Whereas previous interventions

have focused on recovery away from work or directed by others, we identify agentic behaviors by which individuals may reduce their own burnout while at work—and conversely also indicate the limits of such actions. Moreover, by highlighting the distinct recovery patterns for each burnout dimension, we engage with the multidimensional nature of burnout and underscore concerns about collapsing the construct into exhaustion-only models (Leiter & Maslach, 2016). Indeed, such an approach would have missed our robust results for the cynicism dimension, which is particularly relevant to the study of employees (Dean, Brandes, & Dharwadkar, 1998). Our work also answers calls to explain whether and why compassion matters at work (Dutton, Workman, & Hardin, 2014; Rynes, Bartunek, Dutton, & Margolis, 2012), extending our understanding in two complementary ways. First, we shift empirical focus from compassion recipients to those offering it, highlighting the counter-intuitive insight that caring for others must not come at a cost to the self, a trade-off remarked upon for other prosocial work gestures (see Bolino & Grant, 2016; Lanaj, Johnson, & Wang, 2016; Uy, Lin, & Ilies, 2017). Second, we introduce the concept of self-compassion from psychology and map its unique process and impact when compared to other-compassion, thereby stressing the necessity of distinguishing compassion targets. We also hope that these insights may offer guidance to practitioners eager to embrace compassion as a way to manage for human sustainability.

FIGURE 1
Proposed Theoretical Model



LITERATURE REVIEW AND MODEL DEVELOPMENT

The starting point of our model—actor burnout—represents a state of resource depletion comprising three dimensions (Hobfoll, Halbesleben, Neveu, & Westman, 2018; Lee & Ashforth, 1996). The *exhaustion* dimension refers to feelings of being overextended or depleted in physiological resources. Exhaustion correlates with work demands (Maslach, 2003) and relates closely to prior conceptualization of strain (Gaines & Jermier, 1983) and ego depletion (Baumeister, Faber, & Wallace, 1999). The *cynicism*¹ dimension refers to a callous and diminished connection to various aspects of one's work, including one's clients, coworkers, or the work itself. Cynicism represents a state of social depletion characterized by feelings of rejection and alienation. Finally, *inefficacy* captures the self-evaluative dimension of burnout and refers to a depleted sense of one's self or accomplishments. Inefficacy is closely intertwined with performance, both resulting from evaluations of reduced performance (Maslach & Leiter, 2016a) as well as being predictive of subpar performance (Swider & Zimmerman, 2010).

The interplay of these three dimensions is not yet well understood. Early research sought to map the dimensions sequentially, with exhaustion commonly, but not always, being the first indicator of burnout (for a review of early research, see Maslach, Schaufeli, & Leiter, 2001). In contrast, cross-sectional studies have generally suggested that exhaustion and cynicism are correlated with each other, while inefficacy is not (Lee & Ashforth, 1996; Maslach, 2003). Most recently, empirical work has pursued latent profile analysis to compare “full burnout” involving all three dimensions to various “partial burnout” profiles (e.g., high exhaustion and cynicism only; Leiter & Maslach, 2016). Consistent across these research approaches are insights that the three burnout dimensions are distinct but interrelated (Leiter & Maslach, 2016), and that any given person can experience various patterns that are likely to change over time.

Despite this multidimensional richness, most scholars have moved toward treating burnout as a singular construct, either by collapsing the three

dimensions into one or by considering only exhaustion (for recent examples in the *Academy of Management Journal*, see Baer, Dhensa-Kahlon, Colquitt, Rodell, Outlaw, & Long, 2015; Grant, Berg, & Cable, 2014; Lin, Scott, & Matta, 2019). Indeed, exhaustion-only models have received by far the most research attention (Schaufeli, Leiter, & Maslach, 2009). Leading burnout scholars, however, are critical of this development, arguing against efforts to “rename exhaustion as burnout” (Maslach & Leiter, 2016b: 108). Exhaustion alone can be indicative of a host of ailments other than burnout (Leiter & Maslach, 2016) and fails to capture the fact that burnt out people do not simply feel tired but also alienated and dejected (Pines, 2017). Following this guidance, we consider the influence of compassion on all three burnout dimensions.

As noted by our introductory quote, a driving push in the burnout literature is to identify solutions. To date, efforts to remedy burnout have focused on what others can do to help the person, including re-engaging employees, providing social support, improving their work conditions, or teaching coping techniques (for a review, see Maslach, 2017). Such other-directed approaches have been subject to the criticism that they are patronizing at best or stigmatizing at worse, leaving employees reluctant to share their burnout with others. Moreover, many such proposed solutions have not undergone empirical scrutiny (for a review, see Maslach & Goldberg, 1998). Our emphasis on agency and theory testing seeks to assuage such concerns.

Before proceeding, we note one additional characteristic of burnout important to our model: burnout is rarely an isolated phenomenon. It develops primarily in social contexts (Buunk & Schaufeli, 1993), both because of the shared experience of contextual demands and because burnout can be contagious (Alarcon, 2011; González-Morales, Peiró, Rodríguez, & Bliese, 2012; Hobfoll et al., 2018). We stress this because it means that those experiencing burnout are commonly surrounded by others who are as well. This lived reality makes compassion a potentially important agentic remedy because it can be offered to oneself or others.

Compassion as Other- and Self-Care

Organizational scholars conceptualize compassion as a dynamic, interpersonal process that begins with noticing and empathizing with another's pain and culminates in a response to alleviate it (Kanov, Maitlis, Worline, Dutton, Frost, & Lilius, 2004). This emphasis on the “activation and mobilization of

¹ Early studies of burnout were conducted in social service occupations and this detachment dimension (then termed “depersonalization”) referred only to distance from service recipients. Depersonalization was reconceptualized as “cynicism” to be occupation neutral and capture broader alienation from all aspects of work.

action triggered by human pain” (Dutton, Worline, Frost, & Lilius, 2006: 62) represents a unique scholarly focus and is an essential aspect of our upcoming theoretical model. In contrast, psychologists primarily study the affective nature of compassion and its associated emotions (e.g., empathy, sympathy, warmth, pity, etc.)—what organizational scholars consider the second step of the compassion process—while acknowledging that such emotions ultimately predict action (i.e., the third step; see Goetz, Keltner, & Simon-Thomas, 2010).

In organizations, compassionate action can take a range of forms, from passively listening to the sufferer to actively investing abstract or tangible resources into their care (Dutton et al., 2006). For example, one could invite a suffering coworker to a yoga class, organize a social activity, or leave a kind note on their desk acknowledging their difficulty. Among the family of organizational prosocial actions, compassion thus distinguishes itself not in form (i.e., listening to a coworker is not unique to compassion), but in intention (i.e., the reason for listening is). Whereas other prosocial actions like citizenship behaviors are ultimately intended to promote the effective functioning of organizations (Organ, 1988), compassion is directly targeted at human needs (Tsui, 2013).²

To date, compassion scholars have primarily studied its impact on recipients. Promising insights suggest that receiving compassion speeds recovery from pain, reduces anxiety, and makes people feel valued (for a review, see Dutton et al., 2014). Some research also highlights potential benefits for the actor; namely, that those who offer compassion are viewed in a more positive light (Melwani, Mueller, & Overbeck, 2012). Tangential research on prosocial gestures (Bolino & Grant, 2016; Lanaj et al., 2016; Uy et al., 2017), however, warns that such benefits likely come with caveats related to the exhaustion dimension of burnout: helping others takes time and effort away from the self and is therefore costly and depleting.

Intriguingly, psychologists have expanded the conceptualization of compassion to that which is directed at and intended to benefit the self (for a review, see Barnard & Curry, 2011). “Self-compassion” mirrors other-compassion, but entails offering kindness to oneself (Neff, 2003a, 2003b). As with other-compassion, acts of self-care can take various forms, such as signing

up for a yoga class or social activity, or writing a personal reflection acknowledging difficulty. To date, self-compassion has rarely been studied at work (for exceptions, see Kreemers, van Hooft, & van Vianen, 2018; Shepherd & Cardon, 2009). Further, few studies have considered *both* compassion expressions, which could advance our understanding of the complexity of compassion and its impact. We are, however, encouraged to pursue this comparative approach by a select number of surveys, albeit cross-sectional, that suggest that the two expressions are distinct but positively correlated (Crocker & Canevello, 2008; Neff & Beretvas, 2013) at least in specific samples (for an exception, see López, Sanderman, Ranchor, & Schroevers, 2018): older adults and those practicing meditation report greater self- and other-focused concern (Pommier, 2010), while both are lower in students high in self-judgment (Beaumont, Durkin, Martin, & Carson, 2016). Moreover, both can be cultivated by the same practices (Gilbert & Irons, 2005), suggesting that employees have the capacity to engage in either or both compassion expressions.

The Restorative Potential of Compassion for Burnout

We link the depleting experience of burnout and restorative potential of compassion through the salutogenic lens of COR theory and its two key principles for how resources are allocated (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014).

The *primacy of resource loss principle* indicates that resource loss is more salient than resource gain and disproportionate in terms of its degree and speed (Hobfoll et al., 2018). Burnout functions according to this principle because early experiences deplete resources, making it more difficult to contend with subsequent demands (Bakker & Costa, 2014; Maslach & Leiter, 2016b). Burnout “represents erosion in values, dignity, spirit, and will—an erosion of the human soul. It is a malady that spreads gradually and continually over time” (Maslach & Leiter, 2008: 17). Indeed, we see this principle play out for each of the burnout dimensions. For instance, early exhaustion diminishes self-control (Baumeister et al., 1999) making it harder for the depleted individual to protect themselves from further work demands (Bakker & Costa, 2014), while early cynicism means individuals can’t suppress behaviors such as complaining that will further alienate them from others (González-Morales et al., 2012), and early inefficacy shuts individuals out of decision-making (Schaufeli et al., 2009; ten Brummelhuis, ter Hoeven, Bakker, & Peper, 2011) putting them in a position

² We stress, however, that these behaviors are not mutually exclusive and may share downstream consequences. Attending to an employee’s human needs can lead to improved downstream performance and vice versa.

of increasingly diminished self-esteem. Thus, a foundational prediction of our paper is that people who are experiencing burnout will continue to do so in the absence of an appropriate intervention.

Hypothesis 1a. Past exhaustion is positively related to future exhaustion.

Hypothesis 1b. Past cynicism is positively related to future cynicism.

Hypothesis 1c. Past inefficacy is positively related to future inefficacy.

To stop and reverse such loss, the *resource investment principle* suggests that employees must invest in resource-generating activities. The unit of analysis in COR is the resources that can be generated (Halbesleben et al., 2014). Resources fall into three categories (Hobfoll, 1989), all of which have been previously operationalized to link depletion and recovery³ (Baer et al., 2015; ten Brummelhuis & Bakker, 2012). *Energies* refer to emotional and physical resources that have little value in their own right (e.g., sense of self-control, time), but can be spent to accomplish goals or acquire other resources; *conditions* relate to one's positive state and social circumstances (e.g., sense of belonging, status); and *attributes* are personal characteristics, attitudes, or skills that aid the individual, particularly in the realm of stress resistance (e.g., sense of self-esteem, health). Below, we outline our predictions for how self- and other-compassionate actions can generate resources with the potential to reduce burnout. Specifically, we propose that each resource category is relevant for each particular burnout dimension, with self-control (an energy resource) being negatively related to exhaustion, belonging (a condition resource) to cynicism, and self-esteem (an attribute resource) to inefficacy.

Exhaustion. As previously noted, the exhaustion dimension refers to feelings of being overextended, strained (Gaines & Jermier, 1983) or ego depleted (Baumeister et al., 1999). To date, burnout scholars have proposed that organizations or supervisors reduce workload to reduce exhaustion (Maslach & Leiter, 2016a). In accordance with COR's resource investment principle, however, we are interested in identifying resource-generative activities employees could initiate themselves to remedy exhaustion.

One quintessential COR energy resource that past research has identified as helping against exhaustion is self-control (Lanaj, Johnson, & Barnes, 2014), which matters because a reserve helps individuals withstand exertion (Baumeister, 2002). Self-control is particularly suited as an agentic resource to restore exhaustion as it is often referred to as a metaphorical "muscle" that the focal individual can strengthen (Baumeister et al., 1999). Self-control can be generated via rest activities in the form of breaks, formal time off, or improved sleep (Sonnentag et al., 2017; Trougakos, Hideg, Cheng, & Beal, 2014), or via more active forms of self-care such as exercising, improving nutrition (Leiter & Maslach, 2016), or practicing mindfulness (Hülshager, Lang, Depenbrock, Fehrman, Zijlstra, & Alberts, 2014).

Self-compassion is likely to manifest in these kinds of self-control-restorative behaviors because it brings into focus failures or depletion and motivates personal initiative to tackle them (Neff, Kirkpatrick, & Rude, 2007). Self-compassion is predictive of self-regulatory and health-related behaviors including seeking and sticking to treatment (Terry & Leary, 2011; Terry, Leary, Mehta, & Henderson, 2013). Indeed, contrary to the notion that self-compassion promotes self-indulgence or passivity, it has been shown to predict greater responsibility for recovery (Leary, Tate, Adams, Batts Allen, & Hancock, 2007). In short, we predict that individuals suffering from exhaustion can recover when they engage in self-compassionate activities that generate self-control.

Hypothesis 2. (a) Self-compassion is negatively related to the exhaustion dimension of burnout, which is (b) mediated by self-control.

In contrast, we do not predict other-compassion will reduce exhaustion by generating self-control. On the one hand, other-compassion likely saps the self-control reserve because of its inherent self-sacrificial impulse. Research on organizational citizenship (Bergeron, 2007; Bergeron, Shipp, Rosen, & Furst, 2011; Lanaj et al., 2016) and COR (Hobfoll, 1989) has consistently warned that supporting others can come at a personal cost. For instance, other-compassion might require sacrificing a much-needed break to care for a suffering coworker. This persistent focus on others' needs runs the risk of giving up control not only over one's time and energy but also general sense of self (Lilius, 2012) as one is increasingly out of touch with one's own needs. At the extreme, this has been documented by practitioners examining "compassion fatigue," a condition wherein individuals "lose control" (Figley,

³ We exclude *objects* (e.g., tools), the fourth original resource category, from our theorizing because acquiring physical goods has not been examined as a relevant remedy for burnout and is unlikely to function as such.

2013: 154) by over-emphasizing others' problems. Thus, other-compassion has the potential to sap self-control.

On the other hand, this relationship may not be entirely negative. In contrast to traditional citizenship behaviors that are more bounded by work requirements or leadership demands (Zhao, Peng, & Chen, 2014), other-compassion's focus on human needs likely gives the individual more leeway and thus has the potential to enhance self-control. For instance, they may care for another by proposing activities they consider personally restorative, such as taking a yoga class together. Thus, we propose that only self-compassion generates self-control to reduce exhaustion, while other-compassion neither reduces nor contributes to exhaustion.

Cynicism. Cynicism occurs when an employee experiences alienation from the various aspects of their work such as the work itself or other people in it (i.e., clients, coworkers). Burnout scholars have suggested that cynicism might be remedied by addressing the latter; that is, reaffirming a person's membership and sense of community (Maslach & Leiter, 2008). Interventions whereby others support or reintegrate the burnt out employee, however, have not always been successful (Halbesleben, 2006). Building again on COR's resource investment principle, we propose that reducing cynicism might require the individual to reaffirm their own social connections and thereby generate feelings of belonging (Lambert, Stillman, Hicks, Kamble, Baumeister, & Fincham, 2013).

We propose that other-compassion, as an affiliative, self-transcendent action (Halbesleben & Wheeler, 2015), may be well suited to the task. We base this on past findings that giving compassion results in greater affiliative feelings of commitment (Grant, Dutton, & Rosso, 2008), relatedness (Lilius, 2012), and trust (Crocker & Canevello, 2008). Individuals who give other-compassion also report perceiving more compassion from others (Lemay & Clark, 2008) thereby indicating mutual attachment (Grant et al., 2008). Thus, offering other-compassion should increase the perception (Lemay & Clark, 2008) and actualization (Crocker & Canevello, 2008) of a sense of belonging, which in turn should reduce cynicism.

Hypothesis 3. (a) Other-compassion is negatively related to the cynicism dimension of burnout, which is (b) mediated by belonging.

In contrast, we do not predict self-compassion to reduce cynicism by generating feelings of belonging, because self-compassionate activities are not as

sued to connecting with others. Self-compassion deactivates the threat system associated with feelings of insecurity (Gilbert & Irons, 2005) and thus makes individuals' positive self-attitudes less contingent on others (Neff, 2003a). The focal actor practicing self-compassion therefore has fewer motives to engage with others at work. Furthermore, self-compassion activates the self-soothing system (Gilbert & Irons, 2005), making the employee less reliant on others for support. Finally, some empirical evidence suggests that focusing on one's own suffering makes one less caring toward others going through the same experiences (Ruttan, McDonnell, & Nordgren, 2015).

That having been said, we do acknowledge that self-compassion traces its origins to Buddhist notions of social connectedness, and Neff (2003a) has stressed that a defining feature is the recognition of "common humanity." Empirical evidence also indicates that self-compassion correlates positively with some self-ratings of social connectedness (Barnard & Curry, 2011; Neff, 2003b; Neff et al., 2007). Thus, taken together, these impulses may cancel each other out, since individuals acting self-compassionately may distance themselves from specific others at work while also embracing a broader sense of common humanity. Therefore, self-compassion should have no noticeable effect on belonging or subsequent cynicism.

Inefficacy. Inefficacy is associated with a lack of accomplishment and feelings of ineffectiveness (Maslach, 2003). We propose that recovery could be facilitated by enhancing self-esteem, defined as one's evaluation of and attitude toward oneself (Rosenberg, 1965) and identified as a prototypical example of COR's personal attributes category of resources (Hobfoll, 1989). When employees view themselves in a more positive light, this not only improves their subjective evaluation of their own accomplishments (Farh & Dobbins, 1989), but also motivates efforts to pursue further accomplishments (Sommer & Baumeister, 2002). We propose that both self- and other-compassionate actions can increase self-esteem and thereby replenish inefficacy, though for different reasons.

Other-compassion is likely to enhance self-esteem by allowing the individual to see their own value vis-à-vis their impact on others. Indeed, other-compassion has already been identified as one opportunity to increase self-esteem by benefitting others (Canevello & Crocker, 2011; Mongrain, Chin, & Shapira, 2011). Moreover, we know that positive recognition from others can be self-enhancing (Cordes & Dougherty, 1993). Thus, we reason that the focal

individual will evaluate themselves more positively when they care for a suffering coworker, especially when their kindness is appreciated.

Self-compassion, as a private act, does not afford the same opportunities for recognition. We suggest, however, that it can replenish self-esteem, not by demonstrating worth to others, but by directly prompting re-evaluation of one's self-worth. We know that self-compassion is associated with "more careful, thorough processing of unflattering self-relevant information" (Neff, 2003a: 93) and a reduction in feelings of insecurity (Barnard & Curry, 2011). Self-compassion promotes an unconditional acceptance of oneself (Thompson & Waltz, 2008) after a broad spectrum of negative experiences, including failure (Breines & Chen, 2012), difficult emotions (Sbarra, Smith, & Mehl, 2012), and chronic pain (Sirois, Molnar, & Hirsch, 2015). Through honest self-acceptance, self-compassion also fuels growth (Zhang & Chen, 2016) and resilience capabilities (Neff & McGehee, 2010). In short, self-compassion lends itself to thoughts and processes that enhance self-esteem, which in turn should reduce inefficacy.

Hypothesis 4. (a) Self-compassion and (b) other-compassion are negatively related to the inefficacy dimension of burnout, which is (c) mediated by self-esteem.

OVERVIEW OF STUDIES

Our research follows a generalization and extension approach (Tsang & Kwan, 1999) as we test our model (see Figure 1) across two distinct samples (social service providers vs. business school students), experiences of burnout (chronic vs. acute), and methodologies. In Study 1, we test our temporal predictions—that each burnout dimension will persist over time, but can be reduced through acts of self- and other-compassion—via a three-year field survey. For Study 2, we design a within-person randomized compassion intervention and apply an experiential sampling technique to test the mediating effects of self-control, belonging, and self-esteem on the relationship between compassion and subsequent burnout. In accordance with the multidimensional nature of burnout (Leiter & Maslach, 2016), we include all three dimensions in both our studies' path analyses.

STUDY 1

In Study 1, we sought to examine our main effects hypotheses (Hypotheses 1a–c, 2a, 3a, 4a, and 4b). To

do so, we recruited employees from a West Coast social service provider, because this is a context in which our phenomenon is likely transparently observable (Eisenhardt, 1989). Burnout has been well documented in social service employees (Maslach & Leiter, 2008) and the profession's mission attracts those prone to compassionate care (Schabram & Maitlis, 2017). We collected data in three waves, each one year apart, to capture the experience of burnout as it unfolds over time and to mitigate against potential common method bias from transient sources (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Every year, all employees were invited to complete an online survey, given three weeks and two reminders to participate, and incentivized with the chance to win one of three \$200 gift cards. To test our predictions, we collected measures of burnout at Times 1 and 3 and compassion at Time 2.

Sample

We received 284 responses at Time 1 (83% organizational response rate) and obtained 179 responses from prior participants at Time 2 (63% Time 1 response rate) and 130 at Time 3 (73% Time 2 response rate). After listwise deletion of those who had not participated at all three points in time, we retained the sample of 130 respondents. Participants' average age was 40.75 ($SD = 11.17$), average tenure was 10.02 years ($SD = 7.17$); 86% were female, and 32% were unionized. We compared all demographics to non-respondents at Time 1 and found that respondents were less likely to be unionized than non-respondents (32% vs. 45% unionized), $\chi^2(1, N = 442) = 6.75, p < .01$.

Measures

A list of all measures and items can be found in Appendix A.

Burnout. We collected the Maslach burnout inventory general survey (MBI-GS; Schaufeli, Leiter, Maslach, & Jackson, 1996), which includes five items for exhaustion, five items for cynicism, and six reverse-coded items for inefficacy. Participants rated items on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*). All measures exhibited strong internal consistency: exhaustion (Time 1, $\alpha = .91$; Time 3, $\alpha = .86$), cynicism (Time 1, $\alpha = .85$; Time 3, $\alpha = .91$), and inefficacy (Time 1, $\alpha = .77$; Time 3, $\alpha = .74$).

Enacted other-compassion. We included three of the four kindness subscale items from Pommier's (2010) compassion inventory, asking employees to

indicate their answer to the question “To what extent did you try to engage in the following behaviors?” with reference to a 5-point scale (1 = *never*, 5 = *all the time*). Given our emphasis on action, we dropped one item from the original measure (“My heart goes out to employees who are unhappy”); this did not alter the significance of our results, $\alpha = .84$.

Enacted self-compassion. We captured self-compassion using the 5-item kindness subscale from Neff’s (2003b) self-compassion inventory, using the same prompt and scale as for other-compassion ($\alpha = .84$).

Controls. We controlled for participant gender (“0” = *female*, “1” = *male*), age, tenure, and union status (“0” = *non-unionized*, “1” = *unionized*), as each has been shown to influence the likelihood of burnout and compassionate action (Davis, 2011; Yarnell, Stafford, Neff, Reilly, Knox, & Mullarkey, 2015).

Analysis Strategy

We tested our hypotheses in Mplus 8.2 (Muthén & Muthén, 2017), grand-mean centering all our predictor variables (Hofmann & Gavin, 1998) because employees were nested in 45 units. We utilized the “Type = Complex” syntax to account for data nonindependence (Schaubroeck, Shen, & Chong, 2017) by adjusting for parameter estimate standard errors that were a result of the sampling design (Wu & Kwok, 2012).

Prior to hypothesis testing, we conducted a confirmatory factor analysis (CFA) to assess the fit of our eight-factor measurement model, including

the burnout dimensions (exhaustion, cynicism, inefficacy) at Time 1 and Time 3 and self- and other-compassion at Time 2. Given the large number of items, we utilized random assignment (Little, Cunningham, Shahar, & Widaman, 2002) to create two to three item parcels per construct (Williams & O’Boyle, 2008) in order to reduce the sample-size-to-parameter ratio and yield more stable latent estimates. Our hypothesized eight-factor model showed acceptable fit to the data, $\chi^2 = 147.22$ (comparative fit index [CFI] = .97, root-mean-square error of approximation [RMSEA] = .05, standardized root-mean-square residual [SRMR] = .05), and all factor loadings were significant, $p < .01$. The hypothesized model fit the data significantly better than more parsimonious seven-, six-, five-, and four-factor models (all $\Delta\chi^2 < .01$). Given our use of same-source data, we also followed Podsakoff and colleagues’ (2003) precedent and conducted Harman’s single-factor test to evaluate whether substantial variance in the data would be accounted for by a single factor. Fit indices suggested that a single-factor solution fit the data poorly, $\chi^2 = 852.08$ (CFI = .37, RMSEA = .20, SRMR = .14), and significantly worse than our hypothesized eight-factor solution ($\Delta\chi^2 < .01$). We therefore proceeded with our proposed model.

Results

Study 1’s descriptive statistics and correlations appear in Table 1. Multilevel path analysis results are given in Table 2.

TABLE 1
Study 1: Means, Standard Deviations, and Correlations of the Focal Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Exhaustion (T1)	2.85	0.88	(.91)											
2 Cynicism (T1)	2.00	0.82	.60**	(.85)										
3 Inefficacy (T1)	1.71	0.42	.17 [†]	.37**	(.77)									
4 Other-compassion (T2)	3.98	0.68	-.18*	-.23**	-.25**	(.84)								
5 Self-compassion (T2)	3.07	0.68	-.02	.01	-.19*	.18*	(.84)							
6 Exhaustion (T3)	3.12	0.83	.49**	.37**	.21*	-.16 [†]	-.21*	(.86)						
7 Cynicism (T3)	2.25	0.98	.26**	.52**	.34**	-.28**	-.06	.54**	(.91)					
8 Inefficacy (T3)	1.82	0.49	.17 [†]	.33**	.53**	-.21*	-.18*	.37**	.48**	(.74)				
9 Age	40.75	11.17	.06	.08	-.05	.11	.10	-.18*	-.06	-.12	(-)			
10 Gender	0.14	0.35	-.05	-.01	-.08	.03	.02	-.03	.04	-.20*	.25**	(-)		
11 Tenure	10.02	7.17	.15 [†]	.19*	-.07	.04	.10	-.12	.04	-.09	.53**	.24**	(-)	
12 Union	0.32	0.47	.37**	.36**	.01	-.03	.07	.18*	.17*	.07	.19*	-.03	.34**	(-)

Notes: N = 130. Gender: 0, female, 1, male. Union: 0, non-unionized; 1, unionized. “T” denotes time (i.e., Time 1, Time 2, Time 3). Coefficient alphas are reported in parentheses along the diagonal.

[†] $p < .10$
 * $p < .05$
 ** $p < .01$

TABLE 2
Study 1: Path Model Results

Variables	Exhaustion (T3)		Cynicism (T3)		Inefficacy (T3)	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Exhaustion (T1)	.47**	0.07				
Cynicism (T1)			.48**	0.07		
Inefficacy (T1)					.50**	0.09
Other-compassion (T2)	-.02	0.09	-.24*	0.11	-.05	0.06
Self-compassion (T2)	-.21*	0.09	-.03	0.07	-.06	0.05
Age	-.01*	0.01	-.01	0.01	-.003	0.004
Gender	.17	0.17	.24	0.19	-.20	0.11
Tenure	-.02**	0.01	-.002	0.02	.001	0.01
Union	.16	0.14	.10	0.13	.08	0.05

Notes: $N = 130$. *SE*, standard error. Unstandardized coefficients are reported. All predictors were grand-mean centered. Gender: 0, female, 1, male. Union: 0, non-unionized; 1, unionized. "T" represents the data wave.

* $p < .05$

** $p < .01$

To test Hypotheses 1a–c that past burnout is positively related to future burnout, we regressed each burnout dimension at Time 3 on Time 1. We found a positive relationship between Time 1 and Time 3 burnout across dimensions (see Table 2): exhaustion, $b = .47$, $SE = 0.07$, $p < .001$; cynicism, $b = .48$, $SE = 0.07$, $p < .001$; inefficacy, $b = .50$, $SE = 0.09$, $p < .001$. Thus, Hypotheses 1a–c were supported.

Hypothesis 2a predicted that self-compassion would be negatively related to exhaustion. Controlling for past exhaustion (i.e., at Time 1), we found that self-compassion at Time 2 was negatively related to exhaustion at Time 3, $b = -.21$, $SE = 0.09$, $p < .05$, thus supporting Hypothesis 2a. Though not hypothesized, we also examined and found support for our assumption that other-compassion at Time 2 was not related to exhaustion at Time 3, $b = -.02$, $SE = 0.09$, *ns*.

Hypothesis 3a predicted that other-compassion would be negatively related to cynicism. Controlling for cynicism at Time 1, we found that other-compassion at Time 2 was negatively related to cynicism at Time 3, $b = -.24$, $SE = 0.11$, $p < .05$, thus supporting Hypothesis 3a. We also examined and found support for our non-hypothesized assumption that self-compassion at Time 2 was not related to cynicism at Time 3, $b = -.03$, $SE = 0.07$, *ns*.

Hypotheses 4a and 4b predicted that self- and other-compassion are both negatively related to inefficacy. Controlling for Time 1 inefficacy, we found that self-compassion at Time 2 was not related to

inefficacy at Time 3, $b = -.06$, $SE = 0.05$, *ns*; nor was other-compassion at Time 2 related to inefficacy at Time 3, $b = -.05$, $SE = 0.06$, *ns*. As such, neither Hypotheses 4a nor 4b were supported.

Discussion

Study 1 provided support for our baseline prediction that past burnout will be positively related to future burnout for each of the three dimensions; according to COR (Hobfoll et al., 2018), this highlights the necessity for resource-generating interventions. In line with the resource investment principle, we also found evidence that giving compassion constituted such an effective intervention for two of the three burnout dimensions. As expected, we found that self- but not other-compassion remedied exhaustion, while other- but not self-compassion remedied cynicism. Surprisingly, neither form of compassion remedied inefficacy. These results support our prediction that, for compassion to matter, it must fit the idiosyncratic experience of burnout—at least when it comes to two of the three burnout dimensions.

Though these findings are promising, our study design was subject to a number of limitations. First, we did not collect data on our mediating mechanisms (Hypotheses 2b, 3b, 4c). Second, the use of surveys prevented us from pinpointing whether compassionate acts, as opposed to underlying stable traits that motivate such behavior, drove our effects. Third, we sampled employees particularly inclined toward compassion and burnout, which limits our generalizability. Finally, Study 1 took the more conventional approach of studying chronic burnout (Maslach et al., 2001; Schaufeli et al., 2009). More recently, however, scholars have called for examinations of daily variances in acute burnout (Xanthopoulou & Meier, 2014) and short-term recovery (Sonnentag et al., 2017), neither of which our results can speak to. Given these considerations, we designed Study 2 to extend our insights.

STUDY 2

In Study 2, we sought to test our complete model using a new sample, context, and methodology—experiential sampling methodology (ESM)—called for by both compassion (Lilius, 2012) and burnout (Xanthopoulou & Meier, 2014) scholars. We recruited undergraduate business students, because they tend to offer less self- or other-compassion (Beaumont et al., 2016). Further, we conducted the study during their midterm period, in order to maximize the likelihood

of acute burnout (Cushman & West, 2006). Participant consent, contact information, and demographics were collected via a baseline survey two weeks prior to the study. Over 10 consecutive business days (Monday through Friday), students were emailed survey links twice daily. The average start times for surveys were 8:47 a.m. and 8:16 p.m., respectively. To increase participation, students had to complete the baseline survey and at least 80% of daily surveys to obtain research credit, were eligible to win gift cards for 100% completion, and were texted personalized reminders at 11:30 a.m./9:30 p.m. if they had not yet participated.

To increase variance in our independent variable, every day, participants were directed to engage in a specific action adapted from past compassion interventions (see Appendix B for instructions; Breines & Chen, 2012; Leary et al., 2007). On *self-compassion* days, participants were asked to notice one episode during which they would experience difficulty and to treat themselves with kindness. On *other-compassion* days, this language pertained to others. Finally, we also included *neutral* (i.e., no directed compassion) days in which participants were asked to report on what they ate (see Foulk, Lanaj, Tu, Erez, & Archambeau, 2018). Every morning, participants were assigned one of these three instructions using a constrained random matrix (Foulk et al., 2018), such that the order was random both within and across participants; we ensured that participants were given each direction three times, and that a third of participants were assigned each on any given day. We manipulated daily instructions for the purpose of creating greater variance in compassion (our independent variable) than we might have seen had we passively sampled participants' experiences (for another example of this approach, see Quinn, Myers, Kopelman, & Simmons, 2021).

Sample

We recruited 100 undergraduate students from a business school in the Pacific Northwest. Participants' average age was 21.4 ($SD = 3.22$); 69% identified as female; 48% identified as White, 5% identified as Hispanic, and 39% identified as Asian/Pacific Islander. Only 1% of the sample worked full-time, while 56% worked part-time and 39% were unemployed, confirming that being a student was our participants' primary occupation and therefore a relevant context in which to consider burnout. As all students who signed up for the study provided at least three full days of data, we retained the entire sample.

On average, students completed 9.48 days of surveys (range, 3–10), constituting 948 full day-level data points (95% response rate). Since our hypothesized model involved the analysis of two consecutive days (i.e., Day t morning, Day t evening, Day $t+1$ morning), removing responses for which more than one day passed between responses (Mondays or when participants skipped days), left 757 data points. We also removed 55 responses because participants indicated that they did not follow that day's instructions (e.g., because they did not go to school) or provided careless response as indicated by two independent raters. This resulted in a final sample of 702.

Measures

We adapted all Study 1 measures to a diary study design (Gabriel et al., 2019) by including five or fewer items per scale, referencing the context of school in items, changing phrasing to present tense, and including "at this moment" in question prompts to emphasize the immediate time frame (Fisher & To, 2012). A list of all measures and items can be found in Appendix A.

Burnout. We measured burnout every morning using the three highest-loading items from each dimension of the MBI-GS (Schaufeli et al., 1996). Measures were rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) and had strong internal consistency: $\alpha_{\text{exhaustion}} = .88$ (Day t) and $.87$ (Day $t+1$); $\alpha_{\text{cynicism}} = .79$ (Day t) and $.79$ (Day $t+1$); and $\alpha_{\text{inefficacy}} = .74$ (Day t) and $.75$ (Day $t+1$).

Directed compassion. To account for our daily instructions, we created two dummy variables: directed other-compassion (coded "1" for other-compassion, "0" for self-compassion, and "0" for neutral) and directed self-compassion ("1" = self-compassion, "0" = other-compassion, "0" = neutral).

Enacted compassion. In line with our emphasis on action, to measure whether participants had actually acted compassionately, in the evening survey, we asked participants to complete the three highest-loading items from Pommier's (2010) other-kindness and Neff's (2003b) self-kindness subscales. Items were rated on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*); $\alpha_{\text{other}} = .84$, $\alpha_{\text{self}} = .83$. As an additional check, participants also described their action via an open-ended question (see Appendix B for sample responses).

Self-control. Self-control was measured using Lanaj and colleagues' (2014) 5-item scale on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*; $\alpha = .90$). Self-control was collected in the morning

survey because it is related to sleep quality (Lanaj et al., 2014).

Belonging. Belonging was measured using three items from Zadro, Williams, and Richardson's (2004) measure each evening with a 5-point scale (1 = *very slightly or not at all*, 5 = *extremely*; $\alpha = .77$).

Self-esteem. Self-esteem was measured using the four highest-loading items from the Rosenberg (1965) self-esteem scale each evening with a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*; $\alpha = .83$).

Controls. As is common practice in ESM studies, we controlled for day to account for time trends (Lanaj et al., 2016; Sonnentag et al., 2017). To isolate daily burnout fluctuations, we controlled for prior day (Day t) burnout. To account for participants' degree of rest that day, we controlled for sleep quality (Day $t+1$) using Scott and Judge's (2006) four-item measure on a 5-point scale (1 = *very slightly or not at all*, 5 = *very much*; $\alpha = .78$).

Analysis Strategy

Since daily experiences are nested within the person in ESM studies, we first partitioned the variance of each focal variable into within- and between-person components using Mplus 8.2 (Muthén & Muthén, 2017). We noted substantial within-person variance (exhaustion = 18.2%, cynicism = 23%, inefficacy = 24.6%, enacted other-compassion = 62.9%, enacted self-compassion = 68%, self-control = 17.4%, belonging = 24.7%, self-esteem = 28.6%). Thus, we chose to proceed with multilevel path analysis.

Next, given our emphasis on action, we sought to confirm that self-ratings of enacted compassion indeed captured behavior (as opposed to just intention). To do so, two independent coders, blind to the study, independently rated 400 of the written descriptions (interrater reliability: mean $r_{\text{self-compassion}} = .90$, $p < .01$; mean $r_{\text{other-compassion}} = .85$, $p < .01$). These coder-ratings were correlated with self-ratings for both forms of compassion ($r_{\text{self-compassion}} = .19$, $p < .001$; $r_{\text{other-compassion}} = .23$, $p < .001$), but not correlated for opposing compassion ratings ($r_{\text{coder self-compassion/self other-compassion}} = .06$, $p > .05$; $r_{\text{coder other-compassion/self self-compassion}} = -.05$, *ns*).

We proceeded with a single model⁴ and lagged analysis (see Wang, Liu, Liao, Gong, Kammeyer-Mueller, &

Shi, 2013): we specified direct pathways from directed compassion (Day t morning) to enacted compassion (Day t evening) to the three resource mediators (Day t evening for belonging and self-esteem; Day $t+1$ morning for self-control) to the three burnout dimensions (Day $t+1$ morning). For our hypotheses tests, we also included direct and indirect pathways from directed and enacted compassion to the three burnout dimensions. We included controls from Day t (day and burnout) and Day $t+1$ (sleep quality). Our within-level variables (compassion predictors, resources mediators, burnout outcomes) were modeled at level 1 using random slopes. The random effects of proposed mediations were allowed to covary (Bauer, Preacher, & Gil, 2006). Our control variables were modeled as fixed slopes, with day, prior-day burnout, and sleep quality modeled at level 1 (Wang et al., 2013). We group-mean centered level 1 predictors (Hofmann, Griffin, & Gavin, 2000). We followed Preacher, Zyphur, and Zhang's (2010) recommendations for testing mediation in multilevel models to account for the asymmetric sampling distribution of indirect effects. This procedure involves using a parametric bootstrap to estimate and evaluate the significance of our indirect effects (Selig & Preacher, 2008) and a Monte Carlo simulation with 20,000 replications to build confidence intervals around these estimated indirect effects.

To assess the fit of our measurement model, we conducted a multilevel CFA with the eight latent variables at the within-person level. As in Study 1, we utilized random assignment to create item parcels (Little et al., 2002; Williams & O'Boyle, 2008), but only for self-control and self-esteem, as these variables had more than three items each. Our eight-factor model showed acceptable fit, $\chi^2 = 379.09$ (CFI = .96, RMSEA = .04, SRMR = .05); all factor loadings were significant, $p < .01$, and this fit the data significantly better than more parsimonious seven-, six-, and five-factor models (all $\Delta\chi^2 < .01$). Given our same-source data, we again conducted Harman's single-factor test, with fit indices suggesting that a single-factor solution fit the data poorly, $\chi^2 = 2665.52$ (CFI = .47, RMSEA = .13, SRMR = .14), and significantly worse than our hypothesized eight-factor solution ($\Delta\chi^2 < .01$).

Results

Study 2's descriptive statistics and correlations appear in Table 3, multilevel path analysis results in Table 4, and indirect effects for mediation in Table 5.

We first examined Hypotheses 1a–c, predicting that each burnout dimension would be positively

⁴ For completeness, this model includes directed and enacted compassion. Alternate models with only directed compassion and only enacted compassion can be found in an online supplement. All raw data is also made available.

TABLE 3
Study 2: Means, Standard Deviations, and Correlations of the Focal Variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Directed OC (<i>t</i>)	0.31	0.46	(—)														
2 Directed SC (<i>t</i>)	0.32	0.47	-.47**	(—)													
3 Enacted OC (<i>t</i>)	3.66	0.68	.27**	-.12**	(.84)												
4 Enacted SC (<i>t</i>)	3.54	0.72	-.01	.09*	.37**	(.83)											
5 Exhaustion (<i>t</i> +1)	3.21	1.00	.00	.02	.00	-.25**	(.87)										
6 Cynicism (<i>t</i> +1)	2.74	0.87	.01	-.00	-.06	-.16**	.56**	(.79)									
7 Inefficacy (<i>t</i> +1)	2.54	0.74	.00	.00	-.25**	-.32**	.45**	.57**	(.75)								
8 Self-control (<i>t</i> +1)	3.06	0.89	-.02	.01	.01	.22**	-.82**	-.63**	-.49**	(.90)							
9 Belonging (<i>t</i>)	3.45	0.84	.02	-.04	.33**	.28**	-.37**	-.33**	-.50**	.34**	(.77)						
10 Self-esteem (<i>t</i>)	3.77	0.73	-.03	.03	.20**	.47**	-.48**	-.47**	-.64**	.51**	.47**	(.83)					
<i>Controls</i>																	
11 Exhaustion (<i>t</i>)	3.21	1.00	.01	.01	.00	-.21**	.83**	.51**	.40**	-.76**	-.36**	-.45**	(.88)				
12 Cynicism (<i>t</i>)	2.75	0.87	.06	-.04	-.06	-.17**	.52**	.80**	.52**	-.61**	-.31**	-.47**	.56**	(.79)			
13 Inefficacy (<i>t</i>)	2.56	0.73	.01	.02	-.21**	-.27**	.45**	.54**	.77**	-.49**	-.49**	-.64**	.46**	.58**	(.74)		
14 Day (<i>t</i>)	4.84	2.73	-.03	.00	.03	.07 [†]	.04	.05	-.01	-.05	.02	-.04	.04	.06	.01	(—)	
15 Sleep quality (<i>t</i> +1)	4.03	0.90	-.01	.05	-.06	.11**	-.37**	-.25**	-.18**	.42**	.06	.26**	-.32**	-.26**	-.16**	-.02	(.78)

Notes: $N(\text{level } 1) = 702$; $N(\text{level } 2) = 100$. OC, other compassion; SC, self-compassion. Directed OC: 1, other-compassion; 0, self-compassion, 0, neutral. Directed SC: 1, self-compassion; 0, other-compassion; 0, neutral. Correlations, means, and standard deviations for level 1 variables represent relationships among the daily variables at the within-individual level of analysis. Coefficient alphas calculated at level 1 are reported in parentheses along the diagonal.

[†] $p < .10$

* $p < .05$

** $p < .01$

related to future burnout, by analyzing the effect of prior day on next day burnout on neutral days only (i.e., those without directed compassion). We found that exhaustion was positively related to next day exhaustion, $b = .22$, $SE = 0.08$, $p < .01$, and cynicism to next day cynicism, $b = .23$, $SE = 0.09$, $p < .05$, but inefficacy was not positively related to next day inefficacy, $b = .09$, $SE = 0.11$, *ns*. This offered support for Hypotheses 1a and 1b but not 1c.

Hypothesis 2 predicted that (a) self-compassion would be negatively related to exhaustion through (b) self-control. We found no direct effects of directed self-compassion, $b = .05$, $SE = 0.04$, *ns*, or enacted self-compassion, $b = -.02$, $SE = 0.04$, *ns*, on next day exhaustion. However, we did find a direct effect of directed self-compassion on enacted self-compassion, $b = .15$, $SE = 0.05$, $p < .01$, of enacted self-compassion on self-control, $b = .05$, $SE = 0.03$, $p < .05$, and of self-control on exhaustion, $b = -.62$, $SE = 0.07$, $p < .001$. Further, the indirect effect of enacted self-compassion on exhaustion excluded zero (enacted self-compassion \rightarrow self-control \rightarrow exhaustion = $-.03$, 95% CI [$-.07$, $-.00$]) as did the serial indirect effect of directed self-compassion (directed self-compassion \rightarrow enacted self-compassion \rightarrow self-control \rightarrow exhaustion = $-.01$, 95% CI [$-.01$, $-.00$]). These results provide complete

support for Hypothesis 2b and partial support for Hypothesis 2a, since self-compassion was indirectly related to exhaustion through self-control, but not directly. As supplemental analysis, we tested and found no significant direct or indirect effects of other-compassion on exhaustion, as reported in Tables 4 and 5, respectively.

Hypothesis 3 predicted that (a) other-compassion would be negatively related to cynicism through (b) belonging. We found no direct effect of directed other-compassion, $b = -.02$, $SE = 0.03$, *ns*, or enacted other-compassion, $b = .03$, $SE = 0.04$, *ns*, on next day cynicism. We did, however, find direct effects of directed other-compassion on enacted other-compassion, $b = .39$, $SE = 0.05$, $p < .001$, of enacted other-compassion on belonging, $b = .09$, $SE = 0.05$, $p < .05$, and of belonging on cynicism, $b = -.09$, $SE = 0.04$, $p < .05$. Further, the indirect effect of enacted other-compassion (indirect effect = $-.01$, 95% CI [$-.03$, $-.00$]) and serial indirect effect of directed other-compassion (indirect effect = $-.003$, 95% CI [$-.01$, $-.00$]) excluded zero. Therefore, we found complete support for Hypothesis 3b and partial support for Hypothesis 3a, since other-compassion was indirectly related to cynicism through belonging, but not directly. As supplemental analysis, we tested

TABLE 4
Study 2: Path Model Results

Variables	Other-compassion (t)		Self-compassion (t)		Self-control (t+1)		Belonging (t)		Self-esteem (t)		Exhaustion (t+1)		Cynicism (t+1)		Inefficacy (t+1)	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Directed OC (t)	.39**	0.05									-.01	0.06	-.02	0.03	-.00	0.03
Directed SC (t)			.15**	0.05							.05	0.04	.02	0.04	.03	0.03
Enacted OC (t)					-.03	0.04	.09*	0.05	.08*	0.04	.03	0.11	.03	0.04	-.04	0.04
Enacted SC (t)					.05*	0.03	.05	0.04	.15**	0.04	-.02	0.04	.01	0.03	-.00	0.03
Self-control (t+1)											-.62**	0.07	-.39**	0.07	-.20**	0.05
Belonging (t)											-.04	0.04	-.09*	0.04	-.10*	0.04
Self-esteem (t)											-.11*	0.06	-.16**	0.06	-.19**	0.05
Exhaustion (t)											-.00	0.06				
Cynicism (t)													.02	0.05		
Inefficacy (t)															-.06	0.07
Day (t)											.00	0.01	.01	0.01	-.01*	0.01
Sleep quality (t+1)											-.03	0.02	.01	0.03	-.03	0.03

Notes: N(level 1) = 702; N(level 2) = 100. SE, standard error. OC, other compassion; SC, self-compassion. Directed OC: 1, other-compassion; 0, self-compassion, 0, neutral. Directed SC: 1, self-compassion; 0, other-compassion; 0, neutral. Unstandardized coefficients are reported. Predictors were group-mean centered.

* $p < .05$

** $p < .01$

and found no significant direct or indirect effects of self-compassion on cynicism, as reported in Tables 4 and 5, respectively.

Hypothesis 4 predicted that (a) self-compassion and (b) other-compassion are negatively related to inefficacy through (c) self-esteem. We found no direct effect of directed self-compassion, $b = .03$, $SE = 0.03$, ns , or directed other-compassion, $b = -.00$, $SE = 0.03$, ns , nor of enacted self-compassion, $b = -.00$, $SE = 0.03$, ns , or enacted other-compassion, $b = -.04$, $SE = 0.04$, ns , on next day inefficacy. However, we did find direct effects of directed self-compassion on enacted self-compassion, $b = .15$, $SE = 0.05$, $p < .01$, and of directed other-compassion on enacted other-compassion, $b = .39$, $SE = 0.05$, $p < .001$. Further, the relationships between enacted self-compassion and self-esteem, $b = .15$, $SE = 0.04$, $p < .001$, as well as enacted other-compassion and self-esteem, $b = .08$, $SE = 0.04$, $p < .05$, were both significant, as was the relationship between self-esteem and inefficacy, $b = -.19$, $SE = 0.05$, $p < .001$. Finally, both the indirect effects of enacted compassion (self-compassion: indirect effect = $-.03$, 95% CI $[-.05, -.00]$; other-compassion: indirect effect = $-.02$, 95% CI $[-.04, -.00]$) and the serial indirect effects of directed compassion (self-compassion: indirect effect = $-.004$, 95% CI $[-.01, -.00]$; other-compassion: indirect effect = $-.01$, 95% CI $[-.01, -.00]$) excluded zero. Therefore, we find

complete support for Hypothesis 4c and partial support for Hypotheses 4a and 4b, since self-compassion and other-compassion were indirectly related to inefficacy through self-esteem, but not directly.

Supplemental Analysis

Given the consistent support for our hypothesized indirect effects through the three resources, we conducted a post hoc examination of potential spillover paths. This would clarify whether self-control, belonging, and self-esteem can reduce only one burnout dimension each, as hypothesized, or if their benefits extend further. Including these spillover effects did not change the significance of any of our hypothesized paths, and, for this reason, we present the complete and robust model in Table 4. This supplemental analysis identified a number of significant additional mediation paths, which we report in Table 5. Self-esteem mediated the relationships between self- and other-compassion and exhaustion, as well as between self- and other-compassion and cynicism. Moreover, self-control mediated the relationship between self-compassion and inefficacy, while belonging mediated the relationship between other-compassion and inefficacy.

Discussion

To extend our Study 1 insights from the field, in Study 2, we adopted a new methodology, a new time

TABLE 5
Study 2: Indirect Effects for Mediation

	Indirect effect	95% CI [LL, UL]
Criterion: Exhaustion		
Enacted SC → self-control → exhaustion	-.03	[-.07, -.00]
Directed SC → Enacted SC → self-control → exhaustion	-.01	[-.01, -.00]
Supplemental analyses of null predictions (OC paths)		
<i>Enacted OC → self-control → exhaustion</i>	.02	[-.01, .05]
<i>Directed OC → Enacted OC → self-control → exhaustion</i>	.01	[-.01, .03]
Criterion: Cynicism		
Enacted OC → belonging → cynicism	-.01	[-.03, -.00]
Directed OC → Enacted OC → belonging → cynicism	-.003	[-.01, -.00]
Supplemental analyses of null predictions (SC paths)		
<i>Enacted SC → belonging → cynicism</i>	-.004	[-.02, .00]
<i>Directed SC → Enacted SC → belonging → cynicism</i>	-.001	[-.00, .00]
Criterion: Inefficacy		
Enacted OC → self-esteem → inefficacy	-.02	[-.04, -.00]
Directed OC → Enacted OC → self-esteem → inefficacy	-.01	[-.01, -.00]
Enacted SC → self-esteem → inefficacy	-.03	[-.05, -.00]
Directed SC → Enacted SC → self-esteem → inefficacy	-.004	[-.01, -.00]
Supplemental cross-path analyses		
<i>Enacted SC → self-esteem → exhaustion</i>	-.02	[-.04, -.00]
<i>Directed SC → Enacted SC → self-esteem → exhaustion</i>	-.002	[-.01, -.00]
<i>Enacted OC → self-esteem → exhaustion</i>	-.01	[-.03, -.00]
<i>Directed OC → Enacted OC → self-esteem → exhaustion</i>	-.004	[-.01, -.00]
<i>Enacted OC → self-esteem → cynicism</i>	-.01	[-.03, -.00]
<i>Directed OC → Enacted OC → self-esteem → cynicism</i>	-.01	[-.01, -.00]
<i>Enacted SC → self-esteem → cynicism</i>	-.02	[-.05, -.01]
<i>Directed SC → Enacted SC → self-esteem → cynicism</i>	-.003	[-.01, -.00]
<i>Enacted SC → self-control → inefficacy</i>	-.01	[-.02, -.00]
<i>Directed SC → Enacted SC → self-control → inefficacy</i>	-.001	[-.00, -.00]
<i>Enacted OC → belonging → inefficacy</i>	-.01	[-.03, -.00]
<i>Directed OC → Enacted OC → belonging → inefficacy</i>	-.004	[-.01, -.00]

Notes: Supplemental analyses are denoted in italics. OC, other compassion; SC, self-compassion. Directed OC: 1, other-compassion; 0, self-compassion, 0, neutral. Directed SC: 1, self-compassion; 0, other-compassion; 0, neutral. LL, lower limit; UL, upper limit.

frame (acute, daily burnout over two weeks), and a sample less inclined toward either form of compassion (Beaumont et al., 2016). Two initial distinctions from Study 1 stand out. First, we found that, in this design, in the absence of an intervention, cynicism and exhaustion persisted, but inefficacy fluctuated over the 10 days. This suggests that the depleting experiences of cynicism and exhaustion may be more predictable across time frames, but also suggests that individuals must not find themselves in a persistent state of burnout to reap the benefits of compassion. Second, we found no direct effects for any form of compassion on next day burnout. This could be attributable to the shorter time frame, though this would be counterintuitive as it should have made detecting direct effects more likely. Instead, we speculate that this might be the case because we directed compassion via our instructions, thus

either undercutting more stable inclinations captured in the Study 1 sample or creating discomfort in a Study 2 sample disinclined toward compassionate gestures.

Study 2 does provide consistent evidence for the application of COR's resource investment principle as all our mediating hypotheses were supported: acts of self-compassion generated self-control and thereby reduced exhaustion, acts of other-compassion generated belonging and thereby reduced cynicism, and both forms of compassion raised self-esteem and through it reduced inefficacy. Moreover, in probing for spillover effects, we identified additional surprising restorative paths: other- and self-compassion also reduced exhaustion and cynicism via self-esteem, while other-compassion reduced inefficacy via belonging and self-compassion reduced inefficacy via self-control.

GENERAL DISCUSSION

This research was inspired by two contemporary, organizational phenomena: the recognition of employee burnout (Gallup, 2018; World Health Organization, 2019) and growing academic (Rynes et al., 2012; Tsui, 2013) and practitioner (Tan, 2012) interest in bringing compassion into the workplace. Adopting the multidimensional view of burnout, we applied COR's resource allocation principles to predict how actors could act compassionately toward themselves or others and thereby generate resources to remedy their own burnout.

Across two studies, we found that the exhaustion and cynicism dimensions of burnout persisted over time, and that actors experiencing each could intervene via self- and other-compassion respectively, thereby impacting them directly in our first study and indirectly in our second. We also noted that, under the conditions of our second study, both forms of compassion were negatively and indirectly related to subsequent inefficacy, even when ratings of inefficacy fluctuated by day rather than persisting. Taken together, these results indicate that acting compassionately can be a way to pull oneself out of burnout, but only when the type of compassion offered fits the idiosyncratic experience of burnout. We also found support for all predictions about the role of resources in this recovery: self-control mediated the relationship between self-compassion and exhaustion, belonging between other-compassion and cynicism, and self-esteem between both forms of compassion and inefficacy. Finally, our analysis also revealed a number of spillover effects. In Study 1, we noted that the correlations among burnout dimensions were stronger at Time 3 than Time 1, suggesting that, over time, either wear and tear has a greater impact on all three dimensions, or depletion in one makes one more vulnerable in another. In Study 2, supplemental analysis identified spillover pathways such that self-control and self-esteem, but not belonging, could replenish all three dimensions.

We note that these results emerged from a generalization and extension approach (Tsang & Kwan, 1999) wherein we tested our predictions across two complementary research procedures: samples drawn from two populations (older, social service employees inclined to embrace compassion; Bunderson & Thompson, 2009; Schabram & Maitlis, 2017; and younger, business students disinclined to; Beaumont et al., 2016); two time frames (a three-year field survey and 10-day diary study); as well as two manifestations of compassion (unprompted and

directed via instruction). This research strategy afforded us the confidence to generalize from consistent results across our "imprecise replication" (Tsang & Kwan, 1999: 768), while remaining cautiously aware of the importance of context, and seeding future research directions. Our findings principally advance the study of burnout and compassion, but our design also provides potentially important insights to the theoretical COR lens.

Contributions

Burnout. Though scholars have long emphasized the need to study burnout solutions (Maslach, 2017; Maslach & Leiter, 2008), researchers remain focused primarily on antecedents (Schaufeli et al., 2009). In part, this may be attributed to a move toward reductive models of burnout (Baer et al., 2015; Grant et al., 2014; Lin et al., 2019), which make it difficult to identify holistic remedies, since "effective interventions to deal with burnout should be framed in terms of these three dimensions" (Maslach, 2003: 190). In our work, we consistently probed for all three dimensions of burnout and thereby identified important effects that would have been missed by an exhaustion-only approach. We uncovered persistent cynicism among members of two distinct populations, thereby suggesting that cynicism remains as relevant as when it was first identified as a widespread organizational phenomenon (Dean et al., 1998). More promisingly, we found that such cynicism could be readily remedied, including via fairly minimal directions. Cynicism was once considered a promising area of organizational research and described as crucial to understanding how employees' relationships to their organization sour (Dean et al., 1998; Naus, van Iterson, & Roe, 2007). We hope that our insights encourage more work on this empirically neglected construct (Leiter & Maslach, 2016).

Furthermore, inclusion of all three burnout dimensions served as a means to consider employees' agency in addressing their own burnout. To date, research into remedies has primarily considered how others can aid the burnt out employee (Maslach, 2017). While some such external (and passive) solutions to an internal problem have shown promise, not all have been successful (Halbesleben, 2006). Our results indicate that employees can have important agency in their own recovery (Lilius, 2012). This suggests two potential explanations for the relationship between passive and agentic burnout remedies. On the one hand, it may be that the two strategies are complementary and depend on the depleted dimension(s).

While past research has shown how others can help recovery from exhaustion and inefficacy, we found that the actor can reduce their own cynicism. The notion that we might be better suited than others to help ourselves recover from depletion in this most interpersonal of burnout dimensions (Leiter & Maslach, 2017) is somewhat counterintuitive. It is, however, consistent with self-determination theory, a motivational theory related to COR, which has posited that autonomy and relatedness needs interact (Halbesleben et al., 2014). It may be that, to reduce one's sense of alienation, one must feel that one played a role in one's own reintegration. Alternatively, there may be interaction effects or a temporal order between external and internal remedies not yet uncovered. Our results indicate that acting compassionately benefits the actor, but do not speak to whether the actor must initiate or even intend such action. Indeed, our second study highlights that compassion worked when it was directed via prompt. Thus, others may serve to create the conditions needed for actors to help themselves or to prompt them to do so. We are reminded of the old adage "give a man a fish and you feed him for a day. Teach him how to fish and you feed him for a lifetime." To sum, our insights lay the foundation for incorporating agentic with external efforts to more fully understand how recovery unfolds.

Compassion. Our findings should also speak to scholars embracing compassion as a potential antidote against a lack of humanity in the modern workplace (Rynes et al., 2012; Tsui, 2013). To date, compassion research remains "dominated by theoretical and theory-building studies, opening wide possibilities for theory-testing studies that address both the process and the outcomes of compassion at work" (Dutton et al., 2014: 293). When scholars have tested the consequences of compassion, they have focused primarily on the benefits for those who receive it. What little we know about benefits to actors themselves has been framed vis-à-vis their standing in the eyes of such recipients. For instance, a series of studies by Melwani et al. (2012) demonstrated that compassionate actors are judged as more intelligent and better leaders.

Our work suggests a more immediate benefit; namely, that giving compassion can serve an important resource generative function for the self. Indeed, in neither of our studies did we find either compassion expression to ever have a deleterious effect. While this is in line with the broader literature on self-compassion (Neff, 2011), it is somewhat surprising when it comes to other-compassion. Hobfoll (1989) speculated that, when people find themselves

depleted, giving support to others should sap them further; such personal costs have also been identified in previously cited research on prosocial gestures (Bolino & Grant, 2016; Lanaj et al., 2016; Uy et al., 2017). Why, then, did other-compassion serve a singularly restorative function? As we noted in our literature review, compassion is distinguished among the family of prosocial behaviors by its principal attendance to human needs (Tsui, 2013) rather than organizational effectiveness, and this may offer an explanation. Perhaps, there is something fundamentally more beneficial for actors about engaging in acts of kindness and care (e.g., taking someone who is having a hard time out for coffee) than in providing instrumental support (e.g., exerting oneself to provide a friendly review). We further note that our study also did not find any evidence of "compassion fatigue" (Figley, 2013), identified frequently by practitioners among the social service employees that comprised our first sample. In line with the "desperation corollary" of COR (Hobfoll et al., 2018), which suggests that individuals can reach a state of extreme depletion characterized by maladaptive coping, it may be that there exists a tipping point after which compassion ceases to offer benefits. If there is, however, it must be quite high to not have registered in either the longitudinal or the diary designs.

A second contribution emerged from our decision to import the construct of self-compassion from psychology, in line with directives to draw on compassion advancements from the wider social sciences (Rynes et al., 2012). As in past psychological studies, we found that both compassion expressions were positively correlated (Crocker & Canevello, 2008; Neff & Beretvas, 2013) and could be primed by the same type of intervention (Gilbert & Irons, 2005). Despite such similarities, however, we note that their consequences are distinct: each form of compassion had the potential to generate two of three resource categories and diminish two of three burnout dimensions. This makes the point that we cannot simply expect all forms of compassion to remedy all depleting experiences. Instead, scholars must specify, and ideally incorporate into their theorizing and methodologies, the different compassion expressions—an advancement that is not uncommon as areas of study move out of their infancy (e.g., see Fulmer & Gelfand, 2012, for a review of trust referents). Indeed, the broader study of prosocial gestures may benefit from such an approach, as research has contrasted giving and receiving (Grodal, Nelson, & Siino, 2015) but rarely considered the impact of giving to different targets including the self.

Conservation of resources. Though we drew on COR principally to explain why compassion impacts burnout, our research also touches upon important nuances in this theoretical lens worthy of consideration. Just as we have emphasized the limitations of studying burnout as an exhaustion-only phenomenon, reviews of COR research (Halbesleben et al., 2014; Hobfoll et al., 2018) have noted that COR's multiple and dynamic principles are too frequently examined via static or overly minimalist approaches. To date, studies have prioritized resource consumption over generation (Hobfoll et al., 2018), cross-sectional designs (Halbesleben et al., 2014), and the examination of only one resource at a time (Parker, Johnson, Collins, & Nguyen, 2013). By testing a more comprehensive model that included three resource categories, we can offer proof of concept of various under-examined COR theory dynamics (Hobfoll et al., 2018). Specifically, by demonstrating how actions can generate self-esteem concurrently to self-control and self-efficacy, we provide support for the recently introduced concept of "resource caravans" (Halbesleben et al., 2014; Hobfoll et al., 2018), defined as patterns of resources that arise from the same developmental conditions. Moreover, our supplemental analysis revealed that self-control and self-esteem could replenish all three burnout dimensions to varying degrees; this provided evidence for the concepts of "resource equifinality," defined as when multiple resources can achieve the same goal, and "multifinality," defined as when the same resource can achieve multiple goals. Taken together, this suggests the value in developing a taxonomy of previously identified recovery strategies (Sonnentag et al., 2017) based on whether they produce complementary or substitutable resources.

In addition, our comparison of self- and other-compassion also allows us to probe a foundational question regarding the nature of resource-generating strategies. In his introductory piece on COR, Hobfoll (1989) suggested that individuals can cope with resource loss either via direct replacement (e.g., seeking ways to improve on a failed task) or substitution (e.g., shifting focus away from this failure to other areas of competence), alternatively referred to as "direct replacement" versus "indirect investment" (Hobfoll et al., 2018). Replacement was posited as both a more common and more effective strategy (Hobfoll, 1989), and, perhaps not surprisingly, has dominated research (Halbesleben et al., 2014; Hobfoll et al., 2018). Though not a direct test, we propose that self-compassion constitutes a replacement strategy (i.e., self-care to alleviate burnout), while other-compassion functions as a form of

substitution (i.e., turning one's attention away from one's own pain and to caring for others). Thus, our results would counter predictions for the primacy of replacement strategies, as self- and other-compassion generated the same number of resources (two out of three categories) and comparable effect sizes. Moreover, they also contradict the notion that replacement is more likely when individuals are on a loss trajectory (Hobfoll, 1989). In our second study, self-compassion (replacement) and other-compassion (substitution) were effective in remedying exhaustion and cynicism respectively, and both reduced inefficacy. While we stress again that ours is not a direct test of replacement versus substitution, these results warrant further inquiry. It may be that an individual's idiosyncratic state of depletion matters for strategy choice and success.

Limitations and Future Directions

Our results should be considered in light of a number of limitations. Foremost, our generalization and extension approach (Tsang & Kwan, 1999) makes it difficult to know whether our inconsistent findings are attributable to the instability of our results or our design choices. For instance, as previously noted, we cannot say whether our inconsistent direct effects results should be attributed to our two different time frames or voluntary versus directed compassion. Future research should both seek to extend our consistent results and replicate our inconsistent ones, ideally by varying only one rather than multiple elements (sample, timeframe, design).

We particularly encourage extension to additional populations: both our studies largely comprised women, who tend to engage in more other-compassion but less self-compassion (López et al., 2018; Neff, 2003b), and we are curious whether and how compassion might matter in male-dominated professions. Both samples also comprised participants of equal status (i.e., coworkers or fellow students). We know, however, that elevated power and status tend to inhibit other-compassion (van Kleef, Oveis, van der Löwe, LuoKogan, Goetz, & Keltner, 2008) while low status can inhibit self-compassion (Vigna, Poehlmann-Tynan, & Koenig, 2018), making it difficult to know whether our findings would hold in more hierarchical organizations or for leader-subordinate interactions.

Both studies also relied on self-reports, including, in Study 2, where we found only indirect effects of directed compassion through enacted compassion. We particularly encourage replication via controlled

experiments and using objective or multisource measures of compassion and burnout, though we acknowledge that this will be more difficult for self-than other-compassion.

Incorporating compassion recipients would also shed light on the interpersonal dynamics of compassion and recovery. Our focus was very much on the focal actor offering compassion, who happened to be one and the same when it comes to self-compassion. We took this targeted approach both because the compassion literature has prioritized the impact on recipients and because we were specifically interested in agentic efforts to recover. There remains a great deal of work to be done, however, to integrate the various parties in a compassion episode. Do compassionate acts need to be appreciated to have an effect, as we have speculated? Moreover, in line with COR's emphasis on dyadic resource crossover (Hobfoll et al., 2018), does other-compassion generate resources for recipients such that both actor and recipient benefit? We are particularly interested in the role of leaders in promoting compassion and shaping the compassion context as well as whether attachment styles (Mikulincer & Shaver, 2005) and relational schemas between the various parties influence how compassion is given or received. With others already considering collective other-compassion (Dutton et al., 2006), it would be interesting to also study collective self-compassion and the influence of such collective effects on recovery (Sonnentag et al., 2017). Considering organizational compassionate culture and practices (Dutton et al., 2014) also opens the door to examine whether such compassion can function not just as a remedy but also as a prophylactic, as well as what makes those already experiencing burnout choose to act compassionately in the first place.

We took pains to consider time in our research approach, seeking to generalize our findings across a longitudinal and a shortitudinal design—and noting the surprise of direct effects only in the former. In Study 2, however, the availability of a morning survey led to our decision to measure self-control right after sleep, inadvertently time separating it from the measures of belonging and self-control at night as well as testing Hypothesis 2 with the same time and source mediator and dependent variable. Future work should aim to avoid such time separation unless it is theoretically justified. Careful temporal designs could also serve to answer a number of questions raised by this study, such as whether compassion can function as a preventative strategy for those not yet experiencing burnout. Exploring this possibility would shed light on the compassion literature's

fundamental assumption that the necessary starting point of compassion is suffering. Further, it would be helpful to understand the unfolding effects of compassion based on recipient requests or reactions (Dutton et al., 2014). Finally, as we noted, there may exist a tipping point after which offering compassion may become deleterious, which could be identified in another ESM study.

Beyond such limitations, we would encourage more research into some of the complex elements incorporated into this study but ultimately beyond the scope of our paper to fully consider. As we noted in our literature review, the interplay of the three burnout dimensions is not yet well understood. We showed that compassion, and the resources it generates, can matter for all three burnout dimensions, but more work is needed on potential order effects (e.g., if exhaustion is often an early marker of burnout, is early self-compassion more advantageous than other-compassion?) or considerations of compassion when employees are experiencing only “partial burnout” (e.g., does other-compassion trump self-compassion for a cynicism-only profile?). The type of latent profile analysis employed to develop burnout profiles (Leiter & Maslach, 2016) might also lend itself to further explore the resource caravans identified via our supplemental analysis in Study 2 (e.g., what combination of resources would lend itself most to improving employee well-being?).

We conclude by highlighting that recent reviews have indicated that “the area of greatest need for testing COR theory and for the health of organizations is the application of resource theory to interventions and clinical trials, both randomized and more naturalistic” (Hobfoll et al., 2018: 120–121). We encourage future field experiments as a form of co-creation of knowledge with participating organizations.

Practical Implications

Practitioners are increasingly interested in humanizing the workplace through compassion initiatives (Women at Work, 2019). As Google's Chade-Meng Tan (2012) proclaimed, “Compassion is something that creates a vibrant, energetic community. Compassion is good for business.” Our work offers guidance to such employers.

On the one hand, we highlight that compassion can function as one means to address the current burnout epidemic. Participants in both our studies benefited from both compassion offered to others and invested into the self. However, we also found that the calculus is not as straightforward, as all

compassion combats all burnout. Our results depended on the right fit between the two compassion expressions and the three burnout dimensions. Moreover, when employing compassion instructions, we found only indirect effects. This suggests that reaping the benefits of compassion in organizations (Tsui, 2013) is not an easy enterprise and likely requires ongoing investment of resources, particularly in assessing the specific needs of burnt out employees and matching appropriate recovery strategies. We do hope that our work can offer some useful ideas toward those ends. Answering the calls to identify measurements of compassion (Dutton et al., 2014), we utilized validated, quantitative measures of self- and other-compassion from psychology (Neff, 2003b; Pommier, 2010), which employers could readily use to measure fluctuations in compassion. In addition, we adapted our compassion instructions from prior research (Breines & Chen, 2012; Leary et al., 2007) and our data (and lack of direct results) can help practitioners further discern whether interventions are a viable strategy. As noted in our future directions section, we do encourage future field experiments through which managers and academics could co-create knowledge on burnout compassion.

Finally, while our paper considers compassion as a remedy for burnout, we raise the question of whether it could also function as a prophylactic. Here, we echo burnout scholars' warnings that prevention is better than waiting until burnout becomes a problem; the best treatment is not just about fixing the person but also fixing the job that led to such burnout (Maslach, 2017). To leave on an optimistic note, however, we believe that fostering compassionate cultures may facilitate both (see Lilius, Worline, Dutton, Kanov, & Maitlis, 2011). Such cultures are likely particularly adept at identifying or eliminating the situational and structural drivers of burnout as well as promoting compassion to combat burnout. In short, while we positioned compassion as an agentic remedy in this paper, we believe it will be most effective in a culture of compassion that supports the individual rather than putting the onus on them to take better care of themselves and others.

Conclusion

We examined compassion offered to oneself or to others as an agentic action by which employees might remedy their own burnout. From our results emerged a complex view of the restorative potential of compassion, suggesting self- and other-compassion play

different recuperative functions, depending on the idiosyncratic experience of burnout. We hope that this emphasis on fit and multifinality will inspire further research on care and recovery at work.

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APPENDIX A: STUDIES 1 AND 2—MEASURES

The same measures were sourced for both studies. Please see the methods sections for descriptions of how items were selected and adapted to each study's requirements.

TABLE A1
Studies 1 and 2—Measures

	Study 1	Study 2
<i>Burnout</i> Schaufeli et al. (1996)	Exhaustion: MBI-GS items 1–4, 6 Cynicism: MBI-GS items 8, 9, 13–15 Inefficacy: MBI-GS items 5, 7, 10–12, 16	Exhaustion: MBI-GS items 2, 3, 6 Cynicism: MBI-GS items 8, 9, 14 Inefficacy: MBI-GS items 7, 10, 12
<i>Enacted other-compassion</i> Pommier (2010)	1. If I see someone at work going through a difficult time, I try to act caring toward that person. 2. I like to be there for other employees in times of difficulty. 3. When other employees feel sadness, I always try to comfort them.	1. Today, when I saw another at school going through a difficult time, I tried to act caring toward them. 2. Today, I liked to be there for others in times of difficulty. 3. Today, when others felt sadness, I tried to comfort them.
<i>Enacted self-compassion</i> Neff (2003b)	1. I try to be understanding and patient toward those aspects of my personality I don't like. 2. I'm kind to myself when I'm experiencing suffering. 3. When I'm going through a very hard time, I give myself the caring and tenderness I need. 4. I'm tolerant of my own flaws and inadequacies. 5. I try to be loving toward myself when I'm feeling emotional pain.	1. Today, I was kind to myself when I was experiencing suffering. 2. Today, when I was going through a hard time, I gave myself the caring and tenderness I needed. 3. Today, I was tolerant of my own flaws and inadequacies.
<i>Self-control</i> Lanaj et al. (2014)	—	1. I feel drained from school. 2. My mind feels unfocused at school. 3. At school, it takes a lot of effort for me to concentrate on something. 4. At school, I cannot absorb any additional information. 5. At school, I feel like my willpower has gone.
<i>Belonging</i> Zadro et al. (2004)	—	1. I feel accepted by others at [school name]. 2. I feel as though I have a "connection" or bond with others at [school name]. 3. I feel like an outsider at [school name].

**TABLE A1
(Continued)**

	Study 1	Study 2
<i>Self-esteem</i> Rosenberg (1965)	—	<ol style="list-style-type: none"> 1. I feel that I am a person of worth, at least on equal plane with others. 2. I am inclined to feel that I am a failure [reverse-coded]. 3. I have much to be proud of. 4. I take a positive attitude toward myself.
<i>Sleep quality</i> Scott and Judge (2006)	—	<ol style="list-style-type: none"> 1. I had trouble falling asleep. 2. I had trouble staying asleep (including waking up too early). 3. I woke up several times during the night. 4. I woke up after my usual amount of sleep feeling tired and worn out.

Note: MBI-GS, Maslach burnout inventory general survey.

APPENDIX B: STUDY 2—INTERVENTION

**TABLE B1
Study 2—Intervention**

Condition	Prompt	Sample Responses
Self-compassion	At some point today, you will find yourself facing a difficulty related to school (e.g., problems with a team, struggling with an assignment or deadline, etc.). We will ask you to describe this situation in the evening survey. Now, here comes your task: It is easy to criticize or blame ourselves for perceived shortcomings. But, remember that all students at [school name] face challenges and this is completely normal! Instead of being critical, come up with one specific action to be compassionate toward yourself: say something nice to make yourself feel better, get yourself a treat, engage in an act of self-care, etc.	<ul style="list-style-type: none"> • “Today, at school, I was working on a group project in a team I don’t get along with. One member in particular I have a long history with and it just makes me uncomfortable to be with him. I tried to be really kind to myself by listening to uplifting music beforehand and used a breathing meditation app afterwards to keep my mood at bay.” • “Today, I was very stressed because I have a group project coming up and none of my group members are really pulling their weight. I am worried we won’t be able to finish in time, but I also don’t want to do all the work. I was kind to myself by allowing myself to take a two-hour nap after my classes, and I really enjoyed it because I need some extra sleep.” • “I struggled today with an essay I am writing for one of my courses. I felt like I should know this material but am just slower at understanding the material. To be kind to myself, I told myself it is okay to not understand the first time around and I will eventually learn. Additionally, I treated myself to a meal [near campus] to fuel my endeavors and I felt a little better.”
Other-compassion	At some point today, you will witness another person at [school name] facing a difficulty (e.g., problems with a team, struggling with an assignment or deadline, etc.). We will ask you to describe this situation in the evening survey. Now, here comes your task: It is easy to criticize or blame others for perceived shortcomings. But, remember that all students at [school name] face challenges and this is completely normal! Instead of being critical, come up with one specific action to be compassionate toward them: say something nice to them to make them feel better (email/text if you’re not on campus), get them a treat, engage in an act of care, etc.	<ul style="list-style-type: none"> • “Today, when I was with my friend at lunch, he told me about how he did poorly on his practice dental school exam. In his time of sadness, I gave him words of encouragement in order to try and give him a positive outlook. Doing this made me feel as though I was making a difference.” • “My friend had a hard time in her lab today because a classmate was being mean to her. He was so rude, it made her cry. We had a nice long talk in my room until she was giggly and happy. It made me feel happy to help my friend and knowing she has more confidence to stand up to him the next time it happens.” • “A difficult situation faced by someone at school today was in my management class in the afternoon with one of my group members. They were struggling with little sleep and weren’t able to do the readings that were assigned for the day so they were lost with what we were talking about. It made me feel sad for them so I helped them by explaining the material.”

TABLE B1
(Continued)

Condition	Prompt	Sample Responses
Control	Your task today is to keep careful track of what you are eating. Please try to be mindful of all the ingredients in your food, especially in your bigger meals. If possible, please write down everything you eat today.	<ul style="list-style-type: none"> • “For dinner, I ate: rice, shrimp, cooked asparagus, broccoli and carrots, and a side salad. I also had a peanut butter cookie. The meal was at my sorority with my friends at about 5:20 and made me feel happy.” • “I ate a sandwich—two slices of toasted whole-wheat bread with oven-roasted chicken breast. I also had some veggie chips. I ate at my apartment around noon with my sister. It made me feel full.” • “I had a southwestern quinoa salad (vegan—corn, black beans, tomatoes, jalapeño) with avocado toast and eggs for lunch at 11:30. It felt great because that’s my favorite meal but it didn’t fill me up for very long, which is weird because that meal usually keeps me full for at least a few hours.”