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ORIGINAL PAPER

The Dark Side of Helping: Does Returning the Favor from Coworkers Hurt Employee Work Engagement?

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Abstract

This study investigated the potential "dark side" of helping behavior at work – operationalized as provision of social support to coworkers. Drawing from the emotional contagion literature and Conservation of Resources (COR) theory, we proposed and tested a moderated mediational model to examine the mechanisms by which social support received from one's coworkers contribute to the support recipient's work engagement. Employing data from a 12-week-long weekly diary among 142 acute care nurses, we did not find support for the proposed negative relationship between providing social support to coworkers and support providers' work engagement, nor for the overall mediational effect of the relationship between received coworker support and work engagement through support provision. However, we found that some work contextual factors (i.e., stable social support climates from coworkers and supervisors) moderated the weekly processes through which nurses' repaying social support received from coworkers predicts their subsequent work engagement. Specifically, providing support to coworkers had stronger beneficial effects on providers' engagement when coworker/supervisor support climates were relatively low; support received from coworkers had stronger indirect beneficial effects on nurses' engagement when coworker/supervisor support climates were relatively low. Our study findings highlight the complexity of the relationship between social support dynamics and work engagement, and that emotional contagion and COR theory may be insufficient, on their own, to explain social support dynamics between coworkers. We also discuss implications of the findings for managerial practices related to support dynamics at work.

The Dark Side of Helping: Would Returning the Favor from Coworkers Hurt Employee Work Engagement?

Social support has been widely studied in organizational psychology, with research consistently demonstrating that having available social support can have a positive effect on individual well-being (e.g., Halbesleben, 2006; Ng & Sorensen, 2008; Viswesvaran, Sanchez, & Fisher, 1999). In addition to a direct effect, there is some evidence that social support can buffer the negative effects of work stressors for the support recipient, weakening the relationship between stressors and subsequent strains (Cohen & Wills, 1985; Viswesvaran et al., 1999). As such, it is not surprising that social support is often considered to be a positive occurrence in the workplace, something that individuals and organizations should foster.

However, extant research in this area primarily focuses on the *recipient*, or benefactor, of social support. Often overlooked is the possible cost to the *provider* of social support, who may expend limited resources in order to provide support to others. This may be particularly true within demanding occupations, such as acute care nursing (the focal sample in the current study). Given that social support tends to occur in a transaction between two parties (a provider and a recipient), it is important to understand how exchanges of social support affect providers.

Drawing on conservation of resources theory (COR; Hobfoll, 1989, 2001), we contend that providing social support might be damaging to an individual's work engagement through resource drain. We also argue, based on job demands-

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resources theory (JD-R; Bakker & Demerouti, 2007), that there are boundary conditions to this relationship. We propose that the impact of support provision on work engagement likely will depend on the characteristics of the work environment. Specifically, having organizational resources (such as work autonomy) and social resources (such as coworker and supervisor social support climates) will buffer the negative effect of support provision, a potential job demand. Finally, most social support research on employees focuses on the processes of either receiving or providing social support (Halbesleben, 2006; Nurullah, 2012; Viswesvaran et al., 1999). Thus, prior research might be missing the reciprocal social exchange dynamic (Gouldner, 1960) that may occur between recipients and providers of support (e.g., Spector & Fox, 2010). For instance, receiving social support begets later provision of support, possibly draining resources of the support provider down the line. Prior studies which primarily use cross-sectional or multiwave survey designs with a limited number of measurement points might be missing these intricate, dynamic relationships. Therefore, an event-based, weekly diary study has the potential to illuminate this within-person relationship and provide a fuller understanding of the relationship among support receipt, support provision, and work engagement.

Consistent with the past literature regarding time intervals appropriate for measuring within-person experiences (e.g., Bolger, Davis, & Rafaeli, 2003; Shipp & Cole, 2015; Zaheer, Albert, & Zaheer, 1999), we contend that a weekly diary design is particularly applicable to our study in that the reciprocal processes of social support between coworkers (who are part of a longer-term working relationship) may often occur over multiple work days or weeks. Weekly diary designs can capture the processes of social support dynamics as they unfold across work weeks, as well as the change of such dynamics in relation to changes in employee outcomes. Indeed, some empirical studies using weekly diary designs have found evidence for the weekly variability of interpersonal dynamics including social support (Schreurs, Van Emmerik, Günter, & Germeys, 2012), as well as employee motivation (e.g., work engagement; Bakker & Bal, 2010).

In summary, the current study has three purposes. First, we seek to establish the relationship between weekly provision of social support and work engagement. Second, we seek to determine how stable characteristics of the work environment, including work methods autonomy and available social support from coworkers and supervisors—coworker and supervisor support climates—might interact with weekly support provision, such that they may ameliorate the negative impact of this provision on work engagement. Finally, we seek to understand how a social exchange dynamic might explain the relationship between weekly provision of social support and work engagement in the subsequent week. Specifically, we test a moderated mediation model wherein receiving coworker support negatively predicts the recipient's work engagement, as mediated through reciprocation of the support, and moderated by work methods autonomy, supervisor support climate, and coworker support climate (see Fig. 1).

In the present study, we examine dynamic weekly exchanges of peer social support and employees' access to stable social/interpersonal resources—support from coworkers and supervisors—for an important reason. Consistent with COR and JD-R theories, these support-related processes are central mechanisms for employees to generate and maintain social and personal resources and ultimately to remain engaged in work roles (Bakker & Demerouti, 2007; Hobfoll, 1989). In COR terms, social support generally reflects resources employees may gain or lose when they engage in social exchanges with other individuals in the workplace. For example, support receipt may represent a gain in social or interpersonal resources, while support provision may represent a loss in self-regulatory or energy-related resources. In the current study, we conceptualize support provision as discretionary or obligatory helping behaviors at work that may or may not be part of employees' work tasks; through such behaviors, employees provide socioemotional and instrumental assistance to coworkers during typical work weeks for work and/or nonwork purposes. Thus, our operationalization of support provision includes but goes beyond organizational citizenship behaviors toward other individuals (OCBI)—defined as discretionary interpersonal helping behavior that is not part of one's formal job description (Organ, 1988; Williams & Anderson,

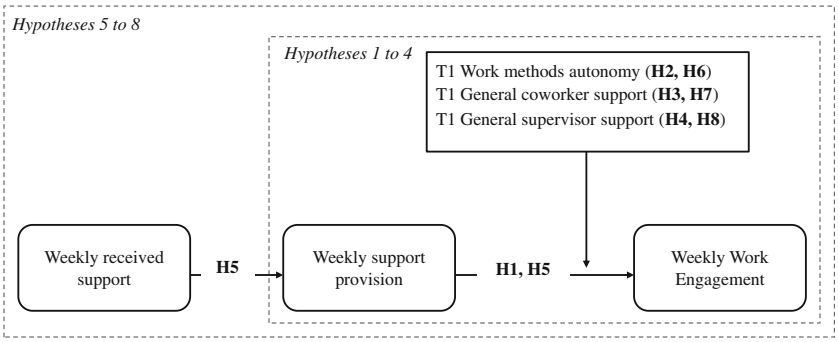

Fig. 1 A hypothesized model of the relationships among received support, support provision, and work engagement

1991). The question of discretion is an important differentiator between support provision and OCBI. As we note below, in high-demand jobs, support provision may become normative and potentially obligatory over time. We draw from the literatures on OCBI, general helping behavior, and social support to derive our hypotheses.

Alternative Perspectives on Providing Workplace Social Support

Theory and research suggests that providing support to coworkers could have either a positive (energy gain) or negative (energy depletion) effect on the provider. Though the current paper is focused primarily on the dark side (i.e., negative effects), both perspectives should be considered. To begin, evidence for a positive perspective of providing coworker support comes primarily from the literature on emotional contagion. Emotional contagion is the tendency for emotions to converge across individuals, primarily through unconscious, automatic processes (e.g., mimicry) and physiological responses (Hatfield, Cacioppo, & Rapson, 1994). In recent years, organizational researchers have begun to investigate emotional contagion as it relates to groups, teams, employees/customers, and leaders/employees within the workplace. For instance, Pugh (2001) found that customers can "catch" the positive emotions of employees, as long as employees outwardly express their positive emotions. Barsade (2002) found that, within work groups, positive emotions tended to transfer, leading to increased cooperation in accomplishing tasks. Johnson (2008) found that leader positive affect predicted follower positive affect.

These findings, along with others, lend support to the notion that emotions can transfer within the workplace. Such emotional contagion might occur during a support exchange in the workplace. To provide an example specific to the current study's occupational setting, Nurse Susan is in need of help with one of her patients, who was being difficult while having an IV inserted. Nurse Bea stops her own task and helps Nurse Susan restrain the patient and insert the IV. Bea helps Susan without complaint and with enthusiasm, and her positive emotion transfers to Susan. Given the reciprocal nature of the relationship, Bea experiences the contagion and feels positive after helping Susan, as well. Ultimately, both nurses feel as if they benefitted from this exchange, and this positive emotion could spread to others within the workplace.

In this scenario, the key factors for emotional contagion—and an ultimately positive experience—to occur revolve around the manner in which support is provided. First, Bea provides support voluntarily. Research has shown that voluntarily and autonomously motivated support can provide well-being benefits to both the provider and recipient of the support (Weinstain & Ryan, 2010). Second, Bea provided the support with a positive emotion—enthusiasm. As long as the support is provided with a positive emotion, this emotion could potentially transfer to the recipient and back to the provider, leading to a beneficial cycle of emotions, which could ultimately help the support provider, as well.

Alternatively, the current study focuses on the potential dark side of providing social support among nurses. Acute care nursing is well-recognized as a high-demand, high-stress job (Kawano, 2008; Leveck & Jones, 1996), where nurses face multiple competing priorities for their attention. Nurses also may lack the resources needed to do their jobs, such as functional computer hardware and other equipment needed for providing quality care (Garrosa, Rainho, Moreno-Jimenez, & Monteiro, 2010). Additionally, patient demands frequently take up significantly more time than planned (Bakker, Schaufeli, Sixma, Bosveld, & van Dierendonck, 2000), leaving less time for nurses to complete their other tasks.

Because of the high-demand nature of nursing, we opted to explore the "dark side" of support provision. Because nurses often experience work overload, providing coworker support might often be obligatory rather than truly discretionary. Along these lines, if support is provided out of a sense of obligation, the emotions of the support provider might be neutral, or even negative. The high levels of burnout among nurses—estimated at around 25% prevalence (Adriaenssens, De Gucht, & Maes, 2015), suggest that many nurses are already at a high level of emotional exhaustion, decreasing the likelihood that they will provide coworker support with high levels of enthusiasm and positive emotion. Though the current study does not assess the motivations and emotions of nurses during a support event, the nature of nursing jobs makes it appropriate to study potential negative personal consequences of their providing of support to fellow nurses. This is not to assume that all nurses experience the same (or fixed) levels of job demands or work-related stress, or that all nurses provide support to others out of a sense of obligation; rather, the high-demand nature of nursing jobs makes it particularly important to investigate the potential negative effects of providing such support.

The Dark Side of Providing Coworker Social Support

Though helping behavior at work has long been considered beneficial (for a review, see Podsakoff, Whiting, Podsakoff, & Blume, 2009), researchers are beginning to investigate the possible costs of providing help. Bolino, Klotz, Turnley, and Harvey (2013) challenged the conventional viewpoint that helping behaviors such as organizational citizenship behaviors (OCBs) always lead to positive outcomes like team and organizational effectiveness; for example, they highlighted situations where OCBs might have personal and professional costs and/or be the result of "dark" motives (e.g., social gains). Being similar in nature to OCBs (particularly OCBI), social

support provision might share some of the same personal and professional costs. Why might this be the case?

COR theory provides insight into the possible costs of providing social support. It posits that individuals seek to protect, foster, and retain resources (Hobfoll, 1989). Hobfoll described four broad categories of resources, namely objects (e.g., car, money), personal characteristics (e.g., self-esteem, ability to self-discipline or self-control), conditions (e.g., being married), and energies (e.g., time). COR theory predicts that strain will occur as a result of three possible conditions: Resources are (1) threatened, (2) lost, and/or (3) insufficiently replenished after being invested.

Consistent with COR theory, we argue that social support can replace lost resources, facilitate the conservation of valued resources, and broaden a person's pool of resources. However, the process of exchanging support with others in an effort to maintain social relations can also detract from a person's resource accruement. Specifically, Hobfoll (1989) stated that social support may be beneficial when it promotes positive social interactions, but may be harmful if it creates stress or fails to fulfill individual needs. In line with Hobfoll's argument, social support from others has been found to be one of the key resources individuals rely on in life or at work (e.g., Balducci, Schaufeli, & Fraccaroli, 2011; Huffman, Culbertson, Wayment, & Irving, 2015; for reviews, see Kossek, Pichler, Bodner, & Hammer, 2011; Nurullah, 2012). Much less, however, is known about the relative cost of resource loss resulting from efforts to maintain social relations, such as providing help to social partners, the sources of potential resources (e.g., social support), and how and when such cost can occur or be prevented.

Though not drawing explicitly from COR theory, Bergeron (2007) discussed the relationship between resource allocation (primarily time) and OCBs. She argued that, because people operate with limited resources and can only allocate these resources to a specific number of tasks (e.g., job performance, family duties, leisure activities, social support of others), provision of help to coworkers could pull people away from other matters, such as task performance. Given that spending energy on one task depletes energy that could be allocated to other tasks (Bolino et al., 2013), resource allocation is a zero-sum game during a typical work day or work week. Therefore, when people expend energy to support coworkers, they will necessarily have fewer resources to expend in other areas of their lives, which can have professional and personal costs. Support provision may also deplete the support provider's self-regulatory resources when he/she not only has to provide the support but perhaps also contemplate whether the support is effective, as well as regulating their own emotions during the support exchange. Indeed, research has linked support provision, in the forms of OCBI and helping upon explicit or implicit request, with depleted emotional resources (e.g., Boren, 2014; Gabriel-Rossetti, Koopman, Rosen, & Johnson, 2017; Halbesleben & Wheeler, 2011; Lanaj, Johnson, & Wang, 2016; Trougakos, Beal, Cheng, Hideg, & Zweig, 2015; Yang, Liu, Nauta, Caughlin, & Spector, 2016). Further, depending on the form of the support, the stress of the recipient (e.g., emotional strain) might spillover to the provider (Afifi, Afifi, Merrill, Denes, & Davis, 2013; Bekker, Croon, & Bressers, 2005). Consequently, support provision could be considered to be a work stressor that depletes resources from the support provider.

In the current study, we examine work engagement in relation to provision of social support. Work engagement can be defined as a positive, work-related state of mind that is characterized by three highly related states: vigor (feelings of energy), dedication (feelings of pride and enthusiasm), and absorption (becoming "lost" in one's work). From a COR theory perspective, engagement can be conceptualized as having an abundance of energy for, attachment to, and motivation for one's work (Schaufeli, Bakker, & Salanova, 2006). Also consistent with Kahn's (1990) thesis, work engagement reflects the extent to which an employee expresses him/herself through fulfilling core job roles and investing his/her physical, emotional, and cognitive efforts and energies simultaneously. In nursing, engagement is increasingly recognized as a critical outcome. For instance, work engagement in nurses is positively related to commitment to their organization (Cho, Laschinger, & Wong, 2006) and engagement in extra-role performance (Salanova, Lorente, Chambel, & Martínez, 2011) and negatively related to turnover (Brunetto et al., 2013). Indeed, research is beginning to examine interventions for increasing engagement in healthcare contexts (including nursing), highlighting the importance of better understanding how to maintain an engaged workforce (e.g., Leiter, Laschinger, Day, & Oore, 2011; Osatuke, Moore, Ward, Dyrenforth, & Belton, 2009).

Work stressors relate negatively with engagement, with resource depletion being a common explanation for this finding (e.g., Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Halbesleben, 2010). Given the resource-consuming potential of providing support as argued above, and the essential role of social interactions in shaping one's work engagement (Kahn, 1990), providing support to fellow nurses could serve as a stressor, taxing one's personal resources, resulting in reduced work engagement.

> Hypothesis 1: The provision of weekly coworker social support negatively predicts the support provider's work engagement in the subsequent week.

The Moderating Roles of Organizational and Social Resources

We expect the impact of support provision on work engagement to depend on perceived characteristics of the work

environment. Even though many nurses may experience high stress in their jobs, their perceptions of work environments could vary widely. Particularly in the current nursing sample, participants worked in a variety of hospital/clinical settings and their work environments are likely to vary as well. Specifically, we hypothesize based on the JD-R model (Bakker & Demerouti, 2007) that job resources can alleviate the negative impact of job demands, including providing support to coworkers. In particular, we examine the role of different job resources (both organizational and social) in the relationship between support provision (a job demand) and work engagement.

According to the JD-R model, job demands refer to physical, psychological, social, or organizational conditions of the job that require a person to exert physical or mental effort and are expected to be related to certain physiological and psychological costs to the individual. Job resources refer to physical, psychological, social, or organizational conditions of the job that are instrumental to achieve work goals, can reduce job demands and the related physiological and psychological costs, and/or stimulate personal development and growth (Bakker, Demerouti, & Euwema, 2005).

In the current study, we examined work environmental resources that have been found to be effective stress buffers in the work stress literature. Accordingly, our efforts can help determine whether the buffering effects of these resources are consistent for weekly support provision and for other common job demands studied in JD-R studies (e.g., work overload [Bakker et al., 2005; Hakanen, Bakker, & Demerouti, 2005]; emotional demands [Bakker et al., 2005]; interpersonal demands [Bakker et al., 2007]). Specifically, we expect that organizational resources (in the current study, work methods autonomy) and social resources (in our case, coworker and supervisor support climates) will ameliorate the negative relationship between support provision and work engagement. Conceptually, our decision to examine the buffering effects of autonomy- and support-related job resource variables on the demand-engagement relation is consistent with the theoretical rationale and empirical evidence for the job demand-control (-support) model (de Lange, Taris, Kompier, Houtman, & Bongers, 2003; Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010).

Work methods autonomy refers to the extent to which an employee has control, independence, or decision latitude in how his/her job is done (Morgeson & Humphrey, 2006). Similar in nature to overall job control, work methods autonomy is a resource commonly studied in the JD-R literature and consistently found as an effective buffer of work-related stress (e.g., Bakker et al., 2005; Schaufeli, Bakker, & Van Rhenen, 2009). In the context of social support provision (which is a possible social stressor), work methods autonomy should allow the social support provider flexibility to decide on *how* and *when* to provide support (i.e., how to distribute their own resources). For example, employees with higher work methods autonomy would be able to adjust the manner in which they are completing a task (e.g., taking a shortcut) in order to immediately help a struggling coworker. This autonomy would also allow the support provider more opportunities to cope with the possible resulting stress (e.g., emotional distress) from helping others (Bakker & Demerouti, 2007). For example, nurses with higher work methods autonomy would be able to work with a more experienced coworker on tasks during the next shift so as to unwind from the stress resulting from helping less experienced coworker during the previous shift. As such, we would expect fewer resources to be drained and less distraction to core job tasks among support providers who work in a more autonomous environment, therefore leading us to predict a less negative impact of support provision on employee work engagement.

By contrast, employees with lower work methods autonomy have fewer options to complete their core job tasks. When offering help to a coworker, they should experience more tension between providing this help and performing their own job tasks, relative to their counterparts with more autonomy. Specifically, given lower latitude to alter the methods or processes required by their core tasks, these employees may be forced to juggle the two roles (support provider and worker) simultaneously, which can lead to lost time and attentional resources and more distraction to the focal job role, thus resulting in lower work engagement. Thus, we propose:

> Hypothesis 2: Work methods autonomy buffers the relationship between support provision and work engagement, such that the negative relationship is weaker among employees having higher levels of work methods autonomy compared to those with lower levels of methods autonomy.

Social support climates refer to the perceived availability of instrumental and socioemotional assistance available from social partners (Thoits, 1982); we focused on coworker support and supervisor support climates. Climate, in the current study, refers to individual perceptions of climate—or psychological climate (James & Jones, 1974; Wessel & Ryan, 2012)—as opposed to shared, aggregated perceptions of social support at work. Psychological climates predict individual outcomes (e.g., Yang, Caughlin, Gazica, Truxillo, & Spector, 2014).

Social support climate relates to a host of positive outcomes (Halbesleben, 2006; Ng & Sorensen, 2008; Viswesvaran et al., 1999) and sometimes buffers the negative effects of stressors (Viswesvaran et al., 1999). In terms of weekly support provision, we expect that social support climates—specifically coworker support or supervisor support climates—will ameliorate the negative effects of weekly support provision. Research has shown that social support can provide employees with useful information, energy, and social

resources (e.g., Bacharach & Bamberger, 2007; De Lange et al., 2003), all of which can be important in buffering the effects of workplace stressors.

Specifically in this study, when having more available workplace support from various colleagues, employees might find providing support to others weekly to be less of a stressor. In other words, nurses with more available support from coworkers and/or supervisors may be able to better replenish resources that were drained by work demands, including providing support to coworkers, and thus maintain an adequate resource pool to sustain work engagement. For example, a nurse may learn strategies from a supervisor about how to choose an appropriate timing to ensure a full lunch break; having a full break then could help the nurse to better replenish energy during the shift, and thus, the typical demands from providing support to coworkers are less likely to diminish his/her work engagement. By contrast, less social support available from colleagues may limit the number of opportunities employees have to replenish or conserve their resources; consequentially, there may be a stronger and perhaps faster process through which helping coworkers becomes demanding, draining focal employees' personal resources and further lowering their work engagement.

Additionally, we argue that our prediction of support climates' buffering effects is consistent with the social information processing approach (Salancik & Pfeffer, 1978). Specifically, supervisor and coworker support climates provide a social context where nurses make sense of their social interactions with colleagues, including their actions of helping coworkers (i.e., behaviors). When such climates are positive, nurses perceive stronger norms of reciprocal social exchange between colleagues and tend to engage in the process of rationalizing their actions of support provision to coworkers (Salancik & Pfeffer, 1978). In other words, nurses in more positive support climates may deem providing support to coworkers as a necessary part of their job routine and thus doing so should not influence how they engage in their core work tasks (i.e., work engagement levels). In contrast, nurses experiencing less positive support climates may not view providing support as a necessary part of their job routine; they may instead view it as an extra demand which interferes with their core tasks and thus respond to it with lowered work engagement.

Indeed, some studies (e.g., Ellington, Dierdorff, & Rubin, 2014; Ozer, Chang, & Schaubroeck, 2014) have found that, in a work environment with higher social density and more task interdependence with coworkers (similar to having more coworker support), social support providers (employees offering OCBI) tend to experience less hindrance stress and less resource competition with focal tasks, relative to their counterparts in a work environment with lower social density and less task interdependence. Hindrance stress refers to stressful experiences (e.g., hassles, role ambiguity) that undermine employees' motivation and well-being (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). Further, Ozer et al. (2014) found a similar buffering effect of leader-member exchange quality—similar to supervisor support, on the relation between OCBI and hindrance stress. Based on all aforementioned theoretical arguments and empirical evidence, we propose:

> Hypothesis 3: Coworker support climate buffers the negative relationship between support provision and work engagement, such that the relationship is weaker for employees with a stronger climate of coworker support.
> Hypothesis 4: Supervisor support climate buffers the negative relationship between support provision and work engagement, such that the relationship is weaker for employees with a stronger climate of supervisor support.

Reciprocity of Social Support

So far, we have established that (1) providing social support might be a work stressor, negatively impacting employee engagement, and (2) this relationship might depend on the organizational and social resources in the work environment. Now, we consider the interplay between social support receipt and social support provision. Though sparse, research has shown that social support receipt and provision tend to be positively related; social support receipt and provision are defined as actual instrumental and/or emotional assistance received from and provided to social partners, respectively. As examples, Jou and Fukada (2002) found that provision and receipt were strongly related in college students; Biehle and Mickelson (2012) also found a strong relationship between support provision and receipt in married couples. Bowling et al. (2004), Bowling, Beehr, and Swader (2005) found that support provision (e.g., OCBI) was positively related to received support (e.g., support received from coworkers). Furthermore, Knoll, Burkert, and Schwarzer (2006) found in a time-lagged study that received social support predicted a subsequent increase in provision of social support.

Bowling et al. (2004, 2005) nested their explanation for the relationship between support and provision in the principle of reciprocity (Gouldner, 1960) and equity theory (Adams, 1965). According to the principle of reciprocity, people will feel compelled to "pay back" received social support with more social support. Equity theory would posit that this compulsion occurs because people experience negative feelings when there is a mismatch between the effort they are putting into a relationship and the benefits that they are receiving. To regulate these uncomfortable emotions, a person would typically want to provide social support to restore equity (Bowling et al., 2004, 2005).

Therefore, we expect received social support will relate positively to provision of social support in employees' weekly work lives. The direction and magnitude of this relationship has been examined by a few daily diary studies; the findings are mixed as some studies report positive relationships while others report negative ones (e.g., Biehle & Mickelson, 2012; Gleason, Iida, Shrout, & Bolger, 2008; Shrout et al., 2010). To reconcile the mixed findings on the within-person dynamics between support receipt and provision, we further examine their relationship using weekly diaries. Consistent with past theorizing on exchange relationships (Adams, 1965; Gouldner, 1960), we expect a positive relationship between weekly support receipt and provision, such that employees who receive more social support from coworkers over the week will tend to also provide more support to coworkers. Specifically, we examine generalized reciprocity instead of one-on-one dyadic reciprocity between focal employees and their coworkers. Considering the earlier arguments linking support provision to work engagement, we also expect social support receipt to be indirectly and negatively linked with work engagement through the provision of support.

> Hypothesis 5: Weekly social support received from coworkers relates negatively to subsequent employee work engagement indirectly through provision of weekly coworker support.

Further, consistent with the rationale for Hypotheses 2–4, receiving social support during a typical work week might actually have a negative impact on an employee's work engagement down the line (something that cross-sectional studies in extant literature cannot detect), especially when the employee has less work methods autonomy and experiences less consistent coworker and supervisor support. In other words, we contend that the extent to which received social support during a work week has an indirect, negative effect on an employee's weekly work engagement through weekly support provision depends on the typical amount of social and organizational resources to which the employee has access.

- Hypothesis 6: Work methods autonomy moderates the indirect negative effect of weekly support received from coworkers on subsequent work engagement through support provision, such that the indirect negative effect is weaker for employees with higher levels of autonomy.
- Hypothesis 7: Coworker support climate moderates the indirect negative effect of weekly support received from coworkers on subsequent work engagement through support provision, such that this indirect negative effect is weaker for employees experiencing a stronger climate of coworker support.
- Hypothesis 8: Supervisor support climate moderates the indirect negative effect of weekly support received from coworkers on subsequent work engagement through support provision, such that the indirect negative effect is weaker for employees experiencing a stronger climate of supervisor support.

In the present study, social support receipt and provision are conceptually distinct from the coworker or supervisor social support climates, because the former constructs refer to actual assistance exchanged between social partners whereas the latter constructs refer to available assistance from social partners. We study the social support climate variables as indicators of stable social resources and assess support receipt and provision in efforts to further understand the dynamics of actual social exchange behaviors occurring between employees. We separate the measurement of social support climate into coworker and supervisor support but focus on weekly support received from and provided to coworkers, for two important reasons: (1) the published literature indicates that coworker and supervisor social support typically co-exist and social relationships with coworkers and supervisors represent two of the most important types of relationships at work (e.g., Beehr, Bowling, & Bennett, 2010; Yang et al., 2016); and (2) our focal research phenomenon is dynamic social exchange between employees, and thus, we assess weekly receipt and provision of support in relation to coworkers.

Our hypotheses are summarized in Fig. 1. By addressing them, our work contributes to the literature in several ways. First, our findings can enhance understanding of potential personal costs of providing support to others at work, expressed in terms of less work engagement, which has been linked to lower levels of task performance and well-being (Christian, Garza, & Slaughter, 2011). Recent research concerning the social support provider has mainly focused on relationships between support provision and well-being variables, especially the *negative* ones (e.g., stress [Ozer et al., 2014; Somech & Drach-Zahavy, 2013], emotion exhaustion [Halbesleben & Wheeler, 2011; Trougakos et al., 2015]), with a few exceptions (e.g., perceived goal progress [Koopman, Lanaj, & Scott, 2016]). Thus, our research responds to the call by Bolino et al. (2013) for a balanced view of helping at work (in our study, providing social support), by exploring its negative relationship with work engagement–a positive well-being outcome.

Second, results of our study may improve understandings of the social exchange dynamic (reciprocity of support) and its consequence for employee motivation by taking into account both organizational and social contextual factors. Such understandings can contribute to COR theory by illuminating ways of restoring resources that support providers lose from helping coworkers. Further, our event-focused weekly diary study design enables us to test a process-focused research model, such that the dynamic weekly process of exchanging social support with coworkers and its subsequent consequence for the focal support provider can be examined rigorously in "real time." Finally, our study can potentially contribute to managerial

practices by offering a balanced view concerning the potential benefits and costs of promoting a supportive workplace climate. Specifically, our findings could inform when and how to prevent unintended, harmful effects associated with employees receiving and providing coworker support.

Method

Occupational Context

The current study focuses on full-time, acute care nurses working in the Pacific Northwest of the U.S. across several hospital systems and specialty types. Nurses are under a variety of complex demands at any given time, ranging from work overload and understaffing to interpersonal demands, such as patient or coworker conflict. At the same time, nurses often rely on one another for instrumental support (helping a patient) or emotional support (dealing with a death of a patient). As such, nursing is an excellent context to study social support. Nurses often work closely with one another on a daily basis, increasing the likelihood that support will occur. At the same time, because of the high workload, nurses are often overwhelmed with their own work, creating a situation where helping others (putting others' needs in front of one's own needs) could be personally harmful. The social support norms within nursing can be strong, but, as with any psychological variable, perceptions and norms likely vary from unit to unit, specialty to specialty, and hospital to hospital.

Participants and Procedure

The nurses participating in the current study were recruited as part of a grant-funded study focusing on nurses' work experiences and retention. Nurses were recruited through professional nursing conferences and conventions, an association newsletter, and word of mouth, and interested nurses were asked to contact the researchers if they would like to participate ($n = 620$). This initial group was invited to participate in the baseline survey (time 1), which was completed by 438 nurses (response rate of 71%). This baseline survey was administered online or hard copy (depending on preference; nearly all participants chose online). Participants received a $20 incentive for completing this survey and were entered in a raffle for four additional $50 gift cards.[1]

These 438 nurses were invited to participate in a 12-week online weekly diary survey study, which commenced during the same month the baseline survey ended. Each Sunday, at noon, an email was sent to each participant with a link to the online diary survey, which took approximately 20 min and assessed the participants' experiences during the prior week. Participants had 48 hours to complete this survey, which closed Tuesday at noon. For each completed weekly survey, participants received $5 (up to a maximum of $60 for participating in all 12 weeks), with an opportunity to be entered in a raffle for winning $50 prizes. A total of 144 nurses participated in the 12-week-long weekly diary study as well as fully completed the baseline survey, 142 of whom provided data for all our focal variables.

This final sample was primarily female (94%) and Caucasian (91%) with an average age of 44.46 (SD = 10.72). All nurses worked full-time, working approximately 37.37 (SD = 10.06) hours per week. They had an average of 11.13 (SD = 8.83) years of tenure at their current organization and 16.61 years (SD = 11.91) working as a nurse.

Measures

The three moderator variables, namely work methods autonomy and coworker and supervisor support climates, were measured at time 1 (baseline survey), whereas the other focal variables were measured in the weekly survey. All items of all focal scales are shown in the Appendix.

Social Support Provision (Weekly) Weekly provision of social support was assessed using three event-based items for which validity evidence was presented as part of a two-wave survey study assessing a broader set of variables, including a measure of workplace events in the nursing field (Sinclair et al., 2015). These items were created by consulting with focus groups of nurses, staff members of the nurses' professional association, and through reviewing prior literature (see Appendix). All items were rated on a 7-point frequency scale (0 = no shifts, 6 = 6 or more shifts). For the three items, the percentage of within-person variance across the 12 weeks (out of the total item variance) was 47.1, 54.7, and 53.0%, respectively; for the total scale score, it was 49.1%. Additionally, our preliminary analysis suggests that the pooled within-person inter-item correlations ranged between .53 and .63, indicating that the items represent a common formative construct.

Social Support Receipt (Weekly) As with support provision, a brief measure of support receipt (four items) was created (see Appendix). All items were rated on a 7-point frequency scale (0 = no shifts, 6 = 6 or more shifts). For the four items, the percentage of within-person variance across the 12 weeks (out of the total item variance) was 57.8, 57.5, 55.0, and 54.0%, respectively; for the total scale score, it was 50.6%. Additionally, our preliminary analysis suggests that the pooled within-person inter-item correlations ranged between .38 and .74, indicating a common formative construct.

[1] As part of the larger project, additional waves of data were collected. However, for the purposes of the current study, we only refer to matched data from time 1 and the weekly data. More information, including a technical report, is available at the project website http://www.oregonnursesfoundation.org/research/nursing-practice-research/the-oregon-nurse-retention-project/.

Work Methods Autonomy (Time 1) Work methods autonomy was measured using a scale by Morgeson and Humphrey (2006). This three-item scale (alpha = .90) assessed the degree to which nurses perceived having latitude to choose how they do their work (see Appendix). All items were rated along a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Coworker and Supervisor Support Climates (Time 1) Coworker and supervisor support climates were assessed using items adapted from Eisenberger, Huntington, Hutchinson, and Sowa's (1986) perceived organizational support measure, specific for supervisor (four items; alpha = .92) and coworker (four items; alpha = .86) support with slight modifications in item wording (see Appendix). All items were rated along a five-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Work Engagement (Weekly) Work engagement was assessed using the validated, nine-item version of the Ulrecht Work Engagement Scale (Schaufeli, Salanova, González-Romá, & Bakker, 2002). This scale measures three related dimensions of engagement (three items each): vigor, dedication, and absorption (see Appendix). All items were rated along a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Consistent with the engagement literature including studies using experience sampling (e.g., Bakker & Bal, 2010; Sonnentag, 2003), the three subscales were moderately correlated (pooled within-person correlations between .51 and .60); therefore, we utilized a composite engagement score for all analyses. The Cronbach's alpha for the full scale was .85 and .99, at the within- and between-person level, respectively. A total of 23.4% of the total scale score variance reflected within-person variance.

Control Variables Nurses' typical shift schedule was represented by their self-reported typical number of shifts per week and was controlled as an individual characteristic variable (level 2—to describe below) in all our analyses. We controlled for this variable because it could influence the possible number of shifts where focal employees report having social support exchange with their coworkers. The number of weekly surveys completed also was controlled as an individual characteristic variable at level 2 because it reflects levels of participant engagement in the research activity and conceptually relates to work engagement, our focal dependent variable. Additionally, we controlled for nurses' work tenure at level 2 because nurses with different lengths of tenure have different levels of work experiences which could account for how they engage in social exchanges with coworkers and their job. Finally, we controlled for quantitative workload at the weekly level (level 1), because this measure reflects demands—an established antecedent of work engagement (Christian et al., 2011; Halbesleben, 2010). Quantitative workload was measured by a single item, namely "In the past work week I did not have enough time to finish my tasks during my scheduled shift" (French, Lenton, Walter, & Eyles, 2000).

Analytical Strategies

Because our study involved repeated surveys of individuals across 12 weeks, we employed multilevel modeling to test our hypotheses (Bryk & Raudenbush, 1992), by using Mplus (version 7.2; Muthén & Muthén, 1998–2013) and setting variables at the week and person level as levels 1 and 2, respectively.

Following recommendations from prior literature (Hox, 2002; Little & Rubin, 1987), we examined whether the missing data in our study are missing at random (MAR), an assumption that is critical for longitudinal multilevel analysis. Specifically, we found that on average there were 25–46 missing cases per week; the pattern of missing data appeared to be random because two of the lowest numbers of missing data points appeared toward the end of the study (weeks 8 and 9) and the highest numbers of missing data points occurred both in the first half (week 4) and the second half (weeks 10 and 11) of the study. Further, at the personal level, the number of weekly surveys completed (versus missed) was not significantly related to any of our study variables including participant background variables like demographics and focal variables (e.g., aggregated levels of support receipt or work engagement). In sum, the aforementioned evidence suggested that the MAR assumption on missing data was met in our data.

Because we proposed that the process of repaying social support received from coworkers predicts subsequent work engagement, we forward lagged work engagement (the dependent variable) by 1 week, such that it was measured 1 week after reciprocal support was provided. As recommended (Hofmann, Griffin, & Gavin, 2000), we centered the predictor (weekly support receipt), mediator (weekly support provision), and week-level control variables (e.g., quantitative workload) around each individual's mean for all analyses. By doing so, week-level (level 1) effects were not confounded by person-level (level 2) effects. We left the level 1 dependent variable (work engagement) and level 2 variables uncentered. In all analyses, we controlled for work engagement from week_t, in order to examine whether hypothesized social-support-related exchange processes predict change in work engagement from week_t to week_{t+1}. Given that we have three proposed moderators as reflected in H2–H4, we tested three baseline and three moderated models—one at a time for each moderator. Specifically, in the baseline models, we added the corresponding independent variable (i.e., weekly support provision) and moderator (e.g., T1 work methods autonomy) to their corresponding level (i.e., level 1 versus level 2), as well as conceptually relevant control variables at level 2 and level 1, with all corresponding level-2 error terms set as random. For the moderated models, the cross-level interaction term was added, in addition to all predictors included in the baseline models. Statistical significance of the fixed-effect coefficient corresponding to the relationship between weekly

support provision and work engagement in the baseline models was examined as evidence for Hypothesis 1. Statistical significance of the fixed-effect coefficients corresponding to the interaction terms in the moderated model was examined as evidence for Hypotheses 2–4. For all significant moderation models, we probed regions of significance using the methods suggested by Preacher, Curran, and Bauer (2006), and plotted the simple slope for the key subgroups (levels of moderator) accordingly.

To test the moderated mediation hypotheses (Hypotheses 5, 6, and 7), we used methods established in the literature (Bauer, Preacher, & Gil, 2006; Hayes, 2013). Specifically, we conducted three tests, one at a time for each moderator, such that the moderation and mediation effects were both tested in an integrated multilevel model. We estimated the conditional indirect effects for each of the three moderated mediation models using the procedures of Bauer et al. (2006) for multilevel mediation (1-1-1) and estimated their confidence interval using a Monte Carlo simulation with 20,000 replications (Preacher, Zyphur, & Zhang, 2010).

Results

As shown in Table 1, the correlation between weekly support provision and work engagement was nonsignificant ($r = .02$, *ns*), which did not support *Hypothesis 1*.

Hypothesis 2 posited that work method autonomy would buffer the relationship between support provision and work engagement, such that the support provision-engagement relationship would be less negative among employees having higher levels of work method autonomy than among those with lower levels of autonomy. As shown by model 2 in Table 2, the interaction term of support provision and work method autonomy was nonsignificant in predicting work engagement ($B = .11$, *ns*). Thus, Hypothesis 2 was not supported.

Hypotheses 3 and *4* proposed that coworker support climate and supervisor support climate, respectively, would buffer the negative relationship between support provision and work engagement, such that the relationship would be weaker for employees reporting higher levels of coworker support climate and supervisor support climate. As shown in model 2 in both Tables 3 and 4, the interaction term between weekly support provision and coworker support climate ($B = -.40$, $p < .05$) and between support provision and supervisor support climate ($B = -.36$, $p < .01$) were both significant. The illustrated interactions are presented in Figs. 2 and 3, where high and low support climate represents one standard deviation (SD) above and below the mean, respectively.

Simple slope analyses indicated that more support provision to coworkers in the prior week was related to higher work engagement in the following week to a marginally significant extent among employees reporting lower levels of coworker support climate ($B = .05$, $p = .07$), and to a significant extent among those reporting from lower levels of supervisor support climate ($B = .07$, $p < .05$).[2] Interestingly, support provision was not significantly related to work engagement among those reporting higher levels of coworker support climate ($B = -.02$, *ns*), yet more weekly support provision to coworkers was significantly and negatively related to subsequent work engagement among those reporting higher levels of supervisor support climate ($B = -.05$, $p < .05$). Therefore, neither *Hypothesis 3* nor *Hypothesis 4* was supported in the predicted direction. However, these findings still may have important implications for social support at work, an issue we return to in the "Discussion" section.

Hypothesis 5 posited that there would be an indirect, negative effect of support received from coworkers on subsequent work engagement through support provision to coworkers. The result from our multilevel analysis indicated that this indirect effect was not significant ($B = -.01$, *ns*). *Hypotheses 6* predicted that work method autonomy would moderate the indirect negative effect of weekly support received from coworkers on work engagement through weekly support provision, such that the indirect negative effect would be weaker for employees with higher levels of work method autonomy, as compared to those with lower levels of autonomy. Results from testing the moderated mediation model indicated that work method autonomy does not moderate the indirect effect of weekly support received from coworkers on work engagement, as shown by the nonsignificant focal interaction term of autonomy and support provision ($B = .11$, *ns*), in the full moderated mediational model.

Hypotheses 7 and *8* predicted that coworker support climate and supervisor support climate, respectively, would moderate the negative indirect effect of weekly support received from coworkers on work engagement through support provision, such that the negative indirect effect would be weaker for employees with higher levels of coworker and supervisor support climate, as compared to those with lower levels of support climate. The results indicated that coworker support climate and supervisor support climate, respectively, moderated the indirect effect of weekly support received from coworkers on work engagement, as shown by the significant interaction term of coworker support climate and support provision ($B = -.36$, $p < .05$) and the significant interaction term of supervisor support climate and weekly support provision ($B = -.33$, $p < .01$), in the full moderated mediation models.[3]

[2] Through probing regions of significance (Preacher et al., 2006), we found that for coworker support climate, the simple slope was positive and significant when the climate was 2.1 or more SD below the mean, and for supervisor support climate, the simple slope was positive and significant when the climate was .58 or more SD below the mean, and was negative and significant when the climate was 1 or more SD above the mean.

[3] Detailed results from these models were not reported in tables, in the interest of not further lengthening the manuscript.

Table 1 Means, standard deviations, and correlations between focal variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
Week-level variables												
1. Work engagement_t_{i+1}	3.34	.82	–	.02	.00	.10**	–	–	–	–	–	–
2. Support provision_t_i	1.69	.83	.22*	–	.69**	.19**	–	–	–	–	–	–
3. Support receipt_t_i	1.04	.67	.21*	.73**	–	.20**	–	–	–	–	–	–
4. Work engagement_t_i	3.36	.81	.99**	.24**	.20*	–	–	–	–	–	–	–
Person-level variables												
5. Work method autonomy_baseline	3.78	.83	.18*	.05	.11	.19*	–	–	–	–	–	–
6. Coworker support_baseline	3.84	.68	.19*	.19*	.21*	.19*	.41**		–	–	–	–
7. Supervisor support_baseline	3.45	1.07	.22**	− .10	− .04	.22**	.39**	.47**	–	–	–	–
8. Gender	.06	.23	.00	.14	.18*	.01	− .12	− .03	−.18*	–	–	–
9. Age	44.46	10.71	.22**	.05	− .13	.21*	−.08	− .06	−.17*	.10	–	–
10. Tenure (years)	11.18	8.80	.15†	.00	− .22**	.14†	.05	.08	− .07	−.08	.48**	–
11. Number of completed weeks	9.27	2.84	.11	− .05	.01	.11	.16†	.07	.09	.01	.06	.03

Correlations above the diagonal represent the week level (n ranges from 1004 to 1319) and are pooled within-person correlations. Correlations below the diagonal represent the person level ($n = 142$). Variables that were measured on the week level were aggregated across days to calculate person-level correlations. Variables labeled with "_baseline" indicate those measured during the large baseline survey; "number of completed weeks" indicates the number of weeks participants completed the survey; "–"s indicate values not available; "0"s indicate absolute values less than .001

†$p < .10$; *$p < .05$; **$p < .01$

According to the Monte Carlo simulation analyses of conditional indirect effects in *R* (20,000 iterations), the indirect effect of support receipt on work engagement via support provision was not significant, regardless of the levels of coworker support climate employees experienced, as shown in Table 5 (lower support climate: $B = .04$, confidence interval—CI = [− .12, .20]; higher support climate: $B = -.01$, CI = [− .18, .15]); lower and higher climate was represented by one standard deviation below and above the sample mean, respectively. However, results from further Monte Carlo analysis indicated that the difference in this indirect effect between employees reporting higher and lower coworker support climate was significant ($B = -.05$, CI = [− .06, − .05]). Additionally, the indirect effect of weekly support received from coworkers on work engagement through support provision was not significant, regardless of the levels of supervisor support climate employees experienced, as shown in Table 5 (lower support climate: $B = .05$, CI = [− .05, .14]; higher support climate: $B = -.04$, CI = [− .13, .06]). However, results from further Monte Carlo analysis indicated that the difference

Table 2 Multilevel estimates using baseline work method autonomy as a moderator of the support provision-work engagement (WE) relationship (Hypothesis 2)

Predictors moderator = work method autonomy	Model 1 (baseline) WE_t_{i+1}	Model 2 WE_t_{i+1}
Week-level variables		
Work engagement_t_i	.10**	.10**
Quantitative workload	− .03	− .03
Support provision_t_i	.02	− .05
Residual variance at week level	.99**	.98**
Person-level variables		
Intercept	3.52**	3.56**
Organizational tenure	.13	.13
Number of completed weeks	.11	.11
Number of shifts per week	− .05	− .05
Work method control_baseline	.15	.13
Residual variance at person level	.94**	.94**
Cross-level variable		
Support provision_t_i × work method autonomy_baseline	/	.11

WE = work engagement, t_i = prior week, t_{i+1} = following week

* $p < .05$; ** $p < .01$

Table 3 Multilevel estimates using baseline coworker support climate as a moderator of the support provision-work engagement (WE) relationship (Hypothesis 3)

Predictors moderator = general coworker support	Model 1 (baseline) WE_t_{i+1}	Model 2 WE_t_{i+1}
Week-level variables		
Work engagement_t_i	.10**	.10**
Quantitative workload	− .03	− .03
Support provision_t_i	.02	.42*
Residual variance at week level	.99**	.98**
Person-level variables		
Intercept	3.25**	3.25**
Organizational tenure	.13	.13
Number of completed weeks	.12	.11
Number of shifts per week	− .04	− .04
Coworker support_baseline	.16	.16
Residual variance at person level	.93**	.93**
Cross-level variable		
Support provision_t_i × coworker support_baseline	/	− .40*

WE = work engagement, t_i = prior week, t_{i+1} = following week
*$p < .05$; **$p < .01$

in this indirect effect between employees reporting higher and lower supervisor support climate was significant ($B = -.08$, CI = [− .09, − .07]). Thus, *Hypotheses 7* and *8* were not supported in the predicted direction, in that coworker and supervisor support climate were significant moderators of the indirect effect, but in a direction opposite to what was hypothesized.

Results from Supplementary Analyses

Comparison of Results With or Without Statistical Controls

Consistent with past practices (Spector & Brannick, 2011), we reran all statistical analyses for pertinent hypotheses (H2–H8) without any statistical controls (four in total) and compared the results from those analyses with the results we report in the manuscript. We found that all results remained essentially the same after removing all controls, in that the magnitude of pertinent regression coefficients only changed at the second decimal level and the statistical significance of all pertinent coefficients remained the same, with just one exception. That is, for testing Hypothesis 3, results from the analysis without statistical controls indicated a marginally significant interaction between coworker support climate and weekly support provision ($p = .055$), as compared to a significant level with the controls

Table 4 Multilevel estimates using baseline supervisor support climate as a moderator of the support provision-work engagement (WE) relationship (Hypothesis 4)

Predictors moderator = general supervisor support	Model 1 (baseline) WE_t_{i+1}	Model 2 WE_t_{i+1}
Week-level variables		
Work engagement_t_i	.10**	.09**
Quantitative workload	− .03	− .03
Support provision_t_i	.02	.36**
Residual variance at week level	.99**	.98**
Person-level variables		
Intercept	3.49**	3.48**
Organizational tenure	.15	.15
Number of completed weeks	.11	.10
Number of shifts per week	− .06	− .06
Supervisor support_baseline	.21*	.21*
Residual variance at person level	.91**	.92**
Cross-level variable		
Support provision_t_i × supervisor support_baseline	/	− .36**

WE = work engagement, t_i = prior week, t_{i+1} = following week
*$p < .05$; **$p < .01$

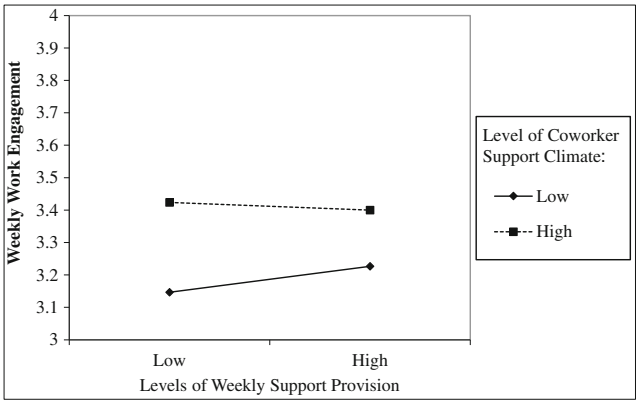

Fig. 2 Coworker support climate moderates the support provision-engagement relationship

included ($p = .049$)—despite the fact that magnitude of the coefficient was nearly identical ($B = -.41$ versus $-.40$, for without versus with controls).

Order of Weekly Support Receipt and Provision Given the reciprocal nature of social exchange (Gouldner, 1960), it is plausible that more provision of social support to coworkers brings about more social support received from coworkers, which further benefits these nurses' subsequent work engagement levels. Therefore, we used the same analytical process described earlier to test an alternative model where weekly support provision positively relates to work engagement in the subsequent week indirectly through weekly support receipt. For this alternative theoretical model, the results from testing all hypotheses were nonsignificant, as compared to significant results found in our primary analyses corresponding to Hypotheses 3, 4, 7, and 8 where coworker and supervisor support climates were moderators. These results suggest that the support receipt and provision exchange may be an asymmetrical process in exerting effect on focal employees' subsequent work engagement.

Concurrent Work Engagement Given that it is theoretically plausible for the social support exchange process to impact work engagement during the same week, we also conducted the analyses with work engagement measured at the same time point as support receipt and provision. For this alternative research design, the results from testing all hypotheses were nonsignificant, as compared to the significant results found in our primary analyses corresponding to Hypotheses 3, 4, 7, and 8 where coworker and supervisor support climates were moderators. These findings reinforce our initial model in which engagement was conceptualized as a lagged outcome of the support process.

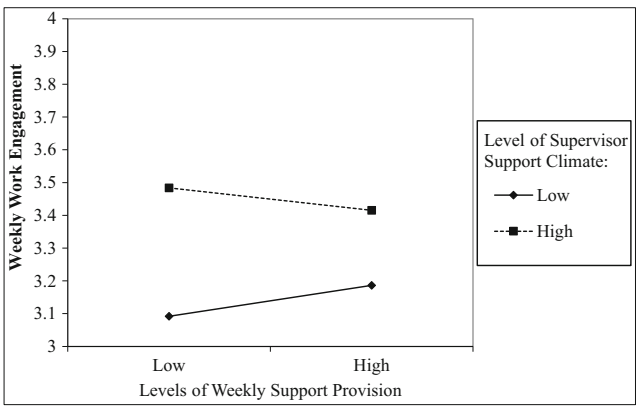

Fig. 3 Supervisor support climate moderates the support provision-engagement relationship

Discussion

Social support is generally considered to be a beneficial and encouraged behavior in organizations, with a host of research studies demonstrating the benefits of this prosocial behavior (Halbesleben, 2006; Ng & Sorensen, 2008; Viswesvaran et al., 1999). However, little attention has been paid to the provider of social support, particularly whether provision of support might drain personal resources and potentially cause harm to a person's work engagement. The current study examined potential costs to the support provider and whether specific workplace conditions impact this relationship, in a study in which weekly data were collected from acute care nurses.

Study Implications

Though most of the hypotheses were not supported and most observed relationships were in directions counter to our predictions, the methodological rigor of our study design suggests that we can have confidence in our findings. As noted earlier, there are alternative perspectives regarding the effects of support provision. Whereas some research presupposes an energy gaining perspective (emotional contagion; Hatfield et al., 1994), other research supports an energy-draining perspective (COR theory; Hobfoll, 1989). We had proposed a "dark-side" perspective—frequent support of others can serve as an additional stressor, draining the provider's limited cognitive and emotional resources. However, there was no direct effect of support provision on subsequent engagement, either in a positive or negative direction.

Thus, this finding suggests that the relationship between social support provision and engagement may be more complex than a simple direct relationship and that emotional contagion and COR theory may be insufficient, on their own, to explain how support provision functions in the workplace. In examining boundary conditions (Hypotheses 3 and 4), we found that support provision to coworkers was the most beneficial to support providers' engagement in a work environment with lower coworker or supervisor support climate. This finding was the opposite of our expectations.

Table 5 Monte Carlo estimated conditional indirect effects of support received from coworkers on work engagement via provision of support to coworkers (week level)

Outcome = work engagement	Moderator level	Estimate	95% confidence interval	
			Lower limit	Upper limit
Moderator = coworker support climate	Low support climate	.04	− .12	.20
	High support climate	− .01	− .18	.15
	Between-group difference	− .05	− .06	− .05
Moderator = supervisor support climate	Low support climate	.05	− .05	.14
	High support climate	− .04	− .13	.06
	Between-group difference	− .08	− .09	− .07

For the moderator level, Low = − 1SD, High = + 1SD. "Between-group difference" represents the difference subtracting the indirect effect of the low-climate group from that of the high-climate group

One possible explanation for these results is that, in environments with lower support climate, support provision may be a rarer, and therefore more salient, event. According to affective events theory (AET; Weiss & Cropanzano, 1996), more salient events can have a greater effect on a person's emotions. Specifically, as posited by AET and other appraisal-focused affect theories (e.g., Lazarus, 1991), a salient event tends to elicit more intense emotional reactions, especially when the event is considered as relevant and important for current goal achievement (e.g., patient care-related tasks that often require coordination between nurses). In other words, when helping others is an especially salient event that is important for work goals, it provides a more immediate boost to the support provider's emotional resources, which further enhances that person's work engagement subsequently. Another related yet somewhat distinct explanation is a compensatory effect. That is, in environments where coworkers and supervisors are generally not supportive (probably not so friendly, either), nurses providing help to coworkers compensate by generating more positive social interactions, which could meet the support provider's need for belonging and further boost his/her work engagement (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Van den Broeck, Ferris, Chang, & Rosen, 2016).

In contrast, when coworkers are generally supportive (higher coworker support climate), a nurse's provision of help to coworkers may be normative—a less salient event that is also less essential for reaching his/her work goals or meeting his/her need for belonging and less likely to influence subsequent work engagement. Interestingly, in environments where supervisor support is common (higher supervisor support climate), we found that helping coworkers was negatively related to the support provider's subsequent engagement at work. It is plausible that nurses who have to provide instrumental and emotional support to coworkers wonder why their coworkers do not rely more on their supervisor for help, given that supervisor support is available. Such rumination—coupled with generally high work demands placed on nurses—could consume mental resources, which might account for the subsequent decrease of the support provider's personal resources and engagement level (e.g., Boren, 2014; Donahue et al., 2012).

We found evidence supporting that both coworker and supervisor support climate moderated the mediational effect of support provision in the support receipt-engagement relationship, though not in the expected direction. Specifically, the mediational effect was significantly more positive for nurses in low coworker or supervisor support climates, than in high support climates. In other words, the exchange of social support between nurses and their coworkers seemed to be more beneficial for the work engagement level of focal nurses—support providers, when they experience lower coworker or supervisor support climate. However, the indirect positive effect of weekly support received from coworkers on focal nurses' subsequent week's engagement as channeled through their provision of support to coworkers was not statistically significant. One plausible explanation is that the magnitude of the indirect effect was relatively small, which could be partially attributed to the study setting where reciprocating received social support is often expected and less salient in day-to-day work, thus generally has less bearing on the nurses' engagement at work. Indeed, the pooled within-person and between-person correlation between support receipt and provision in our study was .69 ($p < .01$) and .73 ($p < .01$), respectively, which indicates high prevalence of reciprocating support from coworkers.

Contrary to our expectation, work methods autonomy did not moderate the relationship between weekly support provision and subsequent work engagement. We expected that having freedom in the manner by which tasks are completed would provide flexibility as to how and when an employee would provide support, which would help support provision to become a less stressful experience. However, this hypothesis was not supported. One plausible explanation is that work methods autonomy may only operate as a resource for performing *required* job tasks. Such autonomy may not

provide any additional resources—at least not in the context of nursing—for tasks like helping coworkers that may be outside the required duties of the job (e.g., patient handling). Along the same line of reasoning, it was not surprising that work methods autonomy did not moderate the indirect effect of weekly support received from coworkers on subsequent work engagement through weekly support provision. That is, in our study setting of acute care nursing, work methods autonomy did not play a significant role in explaining how the process of weekly social support exchange accounts for the support provider's resource management and ultimately work engagement levels.

These results, when taken together, paint a complex picture of the impact of social support provision in the high-demand context of nursing. The dark-side approach—that providing social support might hurt one's work engagement—was supported only when supervisor support climate was relatively high. Meanwhile, the more positive approach—that providing social support might boost one's engagement—was supported only in situations when the general climate of coworker and supervisor support was comparatively low. Such results raise additional questions for future research, specifically on the boundary conditions under which the dark-side versus positive approach takes effect.

Implications of the Results from Supplementary Analyses We are more confident with the robustness of our research findings because in the supplementary analyses we found almost exactly the same pattern of results regardless if we added the four theoretically and methodologically relevant control variables to our hypothesis testing. Further, we found no evidence supporting the alternate model in which social support provision predicted social support receipt. This lends further support to the robustness of our hypothesized theoretical model and about the findings on the role of work context (social support climate) in explaining when the peer support exchange processes among nurses have bearing on support providers' work engagement some point later.

Lastly, we also found no evidence for our hypothesized model as a concurrent rather than lagged model. In other words, the peer support exchange processes among nurses within a certain work week do not seem to influence support providers' engagement during the same week, regardless of the amount of resources available in the work context (work methods autonomy or coworker and supervisor support climate).

These results, combined with the significant moderation effects of contextual factors found in our primary analyses with engagement lagged for a week, indicate that it may take time for peer-support-related processes to exert influence on support providers' resource management and ultimately their engagement at work. For example, nurses may take time (e.g., during the weekend) to reflect on the peer support exchange process that occurred in the prior week and in turn gain some perspectives and appreciation of their relationships with peers, which could then impact their levels of engagement during the following week (e.g., Sonnentag & Grant, 2012).

Strictly speaking, however, it is very difficult to discern exactly how long it takes certain psychosocial processes to influence one's motivation, attitude, and behavior, unless systematic efforts are extended to examine the same research questions using a variety of time lags (week, month, etc.; Cole & Maxwell, 2003; Ployhart & Vandenberg, 2010). Despite this limitation, our study offers some preliminary insight on the longitudinal processes underlying the social support-engagement relationships. We encourage researchers to systematically examine this issue, such as using different time lags in between measurement points within the same study.

Practical Implications

Of course, we need to be cautious in offering practical implications based on our findings, in as much as this is a single study and the magnitude of our effect sizes is low. Our findings tentatively suggest that day-to-day provision of support for coworkers may be an effective way to increase employee engagement in a low support work environment for nurses. If supervisors and managers work in a general climate where social support is less common, encouraging the day-to-day provision of support among employees may increase employee engagement. Modeling such behavior by respected and influential employees may be an effective way to encourage a support-reciprocation cycle between coworkers, ultimately benefiting employee engagement and improving the general support climate.

However, there is a caveat in encouraging or modeling the behavior of reciprocating peer support in high-demand work context like nursing, because providing social support to coworkers may hurt the support provider's engagement under certain circumstances such as when supervisor support climate is generally high. With all things considered, organizational management can maintain and even enhance employees' engagement, as well as productivity and well-being subsequently, through carefully balancing the effort to monitor day-to-day peer dynamics with the effort to promote a generally supportive climate in the work unit (e.g., through providing supervisory support).

Limitations and Future Directions

Although the current study has several strengths (e.g., weekly data design, relevant sample), it is not without limitations. First, the measures of social support were somewhat general in nature. For instance, the scales measuring weekly support

provision and receipt referred to other coworkers, in general, not to specific individuals. In work contexts, there are often specific, key individuals who drive a supportive environment (Gurung, Sarason, & Sarason, 1997). Alternatively, there may be certain individuals who most often require the social support from others. By measuring support provision in general, we could have potentially missed important dyadic-level findings that might reveal meaningful relationships.

Another potential limitation is that we utilized a measure of psychological climate for social support (James & Jones, 1974) rather than an aggregated climate measure. A person's own perception of the climate of the environment may differ from an aggregated consensus across coworkers. Indeed, a person's own perceptions may be impacted by personality characteristics, such as negative affectivity (Judge, Erez, & Thoresen, 2000), and such ratings may not accurately reflect the climate. However, a person's perception is their reality (Spector, Zapf, Chen, & Frese, 2000), and individual perceptions of a supportive climate may be more important than aggregated measures for our study of individual work engagement.

Lastly, our sample was composed of acute care nurses. Though acute care nursing provides an excellent setting to examine the potential dark side of support provision, results from this occupational context may not generalize to many other contexts. Nurses are typically expected to help one another throughout the day. When social support is an expectation, as opposed to a citizenship/prosocial behavior at a worker's discretion, it may have different benefits and costs. For example, providing social support to a peer in such environments may be energizing and motivating for the support provider only when the dyadic peer relationship is of high quality—where emotional contagion is more likely to occur between the dyad. As a result, the findings from the current study—many of them contrary to our expectations—may have been impacted by these nursing-context-specific characteristics.

An obvious direction for future research, then, is to examine the cost of support provision—and possible boundary conditions—in alternative jobs and contexts. In jobs where support is less of an expectation, support provision may very well function differently. It is also likely that different types of support provision (e.g., emotional versus instrumental support)—based on the context of the job—may impact different sets of emotional, physical, or mental resources. For instance, in a physically demanding job, helping others may drain physical resources. A commercial electrician, who often has to help another electrician complete tasks, may be more physically exhausted at the end of each day. A staff psychologist, who often provides emotional support to coworkers (outside of his/her job description), may be more emotionally exhausted at the end of work day. In the context of healthcare such as nursing, perhaps it is critical to measure both physically demanding and emotionally demanding support provision in an effort to predict outcome variables specific to physical and emotional resource drain, respectively. By aligning the type of support provided with specific outcomes, future research can examine possible dark-side effects with more precision.

Given the unpredicted and complex findings in the current study, it is critical, in the future, to examine other boundary conditions and predictors of support provision. We found no impact of work methods autonomy, while support provision had a positive impact on engagement only when the general climate of coworker and supervisor support was relatively low, and had a negative impact on engagement only when supervisor support climate was relatively high. Other boundary conditions, that we did not consider, may also play important roles in the relationship between support provision and engagement/other outcomes. For example, psychological contract breach (e.g., whether an employee feels as if the explicit and implicit contract with their employer has been fulfilled; Rousseau, 1995) may predict whether employees will initiate and reciprocate helping behaviors at work. Specifically, it may moderate the relationship between support receipt and support provision, such that employees demonstrate a weaker receipt-provision relationship (less reciprocation of support) when experiencing more psychological contract breach. A climate of organizational justice might moderate the relationship between support provision and outcomes, such that individuals who believe that they are generally treated fairly and equitably by their coworkers and organization would experience more benefits as a result of providing support to others at work. An understanding of such boundary conditions will inform the science of when support provision might benefit versus harm employees.

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Appendix Measures of All Focal Study Variables

Weekly scales ("in the past week" was used in the scale instructions):

Support Receipt

1. Other nurses shared knowledge with me about nursing practice.
2. Another nurse helped me when I really needed it.

3. A coworker taught me effective ways to deal with people.
4. My coworker taught me an effective technique or strategy.

Support Provision

1. I shared knowledge about nursing practice with a coworker.
2. I helped a fellow nurse when s/he needed me.
3. I responded to the emotional needs of a fellow worker.

Work Engagement

1. I was enthusiastic about my job.
2. My job inspired me.
3. I was proud of the work that I did.
4. At my work, I felt bursting with energy.
5. At my job, I felt strong and vigorous.
6. When I got up in the morning, I felt like going to work.
7. I felt happy when I was working intensely.
8. I was immersed in my work.
9. I was absorbed in my work.

Baseline scales:

Work Method Autonomy

1. I can decide what methods I use to complete my work.
2. I have independence and freedom in how I do my work.
3. I can decide how to go about doing my work.

General Coworker Support

1. My coworkers strongly consider my goals and values.
2. My coworkers really care about my well-being.
3. My coworkers care about my opinion.
4. My coworkers would ignore any complaint from me. (R)

General Supervisor Support

1. My manager strongly considers my goals and values.
2. My manager really cares about my well-being.
3. My manager cares about my opinion.
4. My manager would ignore any complaint from me. (R)

(R) indicates items to reverse code.

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