Understanding Employees' Unused Vacation Days: A Social Cognitive Approach

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Despite the benefits of vacations for health and well-being, many employees do not use all of their paid vacation days. In this article, we seek to understand why this occurs. Using a social cognitive perspective, we propose that employees use fewer vacation days when they do not believe they can successfully detach from work while on vacation (i.e., have low detachment self-efficacy), do not expect positive outcomes (e.g., feeling relaxed, connecting with loved ones) from their vacations, and expect negative outcomes (e.g., feeling stressed, facing negative financial consequences) from their vacations. We test this explanation across four studies in which we develop and validate measures for our social cognitive constructs (Studies 1–3) and test whether these constructs predict employees' unused vacation days (Study 4). Results revealed that employees had more unused vacation days if they lacked detachment self-efficacy, did not expect to feel relaxed on vacation, and expected negative financial consequences of vacations. Overall, our results highlight the usefulness of social cognitive theory for understanding employees' unused vacation days. We discuss implications for theory, future research, and practice.

Keywords: vacation, self-efficacy, social cognitive theory, detachment, policy use

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Vacations provide an opportunity for employees to recover from the stress and demands of work and sustain their health and well-being (de Bloom et al., 2009; Gump & Matthews, 2000; Strandberg et al., 2018). Despite the benefits vacations afford, many employees do not use all of their paid vacation days (Fakih, 2018; Hilbrecht & Smale, 2016). A recent survey conducted by the Society for Human Resource Management (2017) revealed that, on average, only 68% of employees use all of their paid vacation days across a wide range of industries (Society for Human Resource Management, 2017). These findings are especially concerning, given that U.S. employees tend to receive a relatively small number of paid vacation days compared with other nations, with the most common allotment of annual paid vacation days for U.S. employees being 10 days (Matos, 2014). Given the beneficial

effects of vacations for employees' health and well-being, it is important to understand why employees so frequently choose not to fully use their paid vacation days.

Although many popular news articles have addressed this issue (Dickler, 2018; Howe, 2017; Lipman, 2018), little research has focused on understanding the psychological factors that predict unused vacation days. Most previous research on this topic has focused instead on identifying the demographic and job-related factors that predict unused vacation days (Fakih, 2018; Hilbrecht & Smale, 2016). To address this gap, we draw on social cognitive theory (Bandura, 2001), an influential psychological theory that seeks to explain the cognitive factors driving important domain-specific decisions. We propose that employees do not use all of their vacation days when they: (a) lack confidence that they can successfully detach from work during vacations, (b) expect negative outcomes from taking vacations, and (c) do not expect positive outcomes from taking vacations. In doing so, we provide the first explanation and empirical examination of the psychological factors that predict unused vacation days.

This research also offers multiple contributions to the broader occupational health literature. One area that we contribute to is research on recovery from work stress. Although a substantial body of research has documented the importance of engaging in recovery activities such as vacations, research has less frequently examined the psychological factors that function as antecedents of such activities (Sonnentag, Venz, & Casper, 2017). Our social cognitive account responds to calls for research on this topic in several ways. First, we introduce a new domain-specific self-efficacy construct—detachment self-efficacy. Although research has established the important consequences of detaching from

work (i.e., refraining from job-related activities and thoughts; Bennett, Gabriel, Calderwood, Dahling, & Trougakos, 2016; Sonnentag & Fritz, 2015; Sonnentag et al., 2017), research has not yet focused on employees' beliefs about their ability to detach. Second, although previous recovery research drawing on a social cognitive perspective has emphasized the self-efficacy component (Sonnentag & Kruel, 2006), none of this research has identified recovery-relevant outcome expectations—another important component of the social cognitive framework. We address this gap by identifying outcome expectations relevant to taking vacation. By introducing these constructs, we respond to the call to better understand the psychological factors that promote engagement in recovery-related behaviors (Sonnentag et al., 2017).

We also contribute to the recovery literature by developing psychometrically valid measures of our social cognitive constructs. Although these constructs are contextualized specifically to vacation, they can likely be used to understand engagement in other recovery-related behaviors (e.g., workday breaks, sleep, beneficial leisure activities) and to examine social cognitive mechanisms through which more distal contextual factors (e.g., supervisor-related factors) impact employees' recovery-related behaviors. This helps pave the way for research clarifying how contextual factors (e.g., supervisor support for recovery; Bennett et al., 2016) impact employees' engagement in specific recovery-related behaviors (Sonnentag et al., 2017).

Finally, our article contributes to the work–life literature that focuses on employees' underuse of workplace policies intended to promote work–life balance (Kossek, Baltes, & Matthews, 2011). To the extent that these policies can help employees achieve work–life balance, it is important to understand why employees are hesitant to use them. Researchers have suggested that future studies should clarify why specific policies are underused so that barriers to policy use can be addressed (Bourdeau, Ollier-Malaterre, & Houlfort, 2019; Perrigino, Dunford, & Wilson, 2018). By examining the reasons employees underuse one such policy—paid vacation time—we generate novel insights that help clarify the psychological barriers to using policies that are designed to benefit both employees and organizations (Bourdeau et al., 2019).

In what follows, we summarize the previous literature on the effects of taking vacation on health and well-being, as well as the previous research identifying factors that predict unused paid vacation days. We then introduce social cognitive theory (Bandura, 2001) and develop a social cognitive account of employees' unused vacation days. We present four studies in which we develop valid measures of our social cognitive constructs and then test our proposed account. Finally, we discuss the implications of our findings for theory, research, and practice.

Literature Review

The Effect of Vacations on Health and Well-Being

Recovery is the process during which employees' increased strain due to work or other demands return to prestressor levels—a process that results in the outcome of feeling recovered (Craig & Cooper, 1992; Sonnentag et al., 2017). According to the effort–recovery model (Meijman & Mulder, 1998), the exertion required to meet work demands results in short-term physiological and psychological strain reactions (Sonnentag & Fritz, 2007). This

heightened strain is reduced when employees take breaks from work, decreasing the exposure to demands and allowing recovery to occur. However, without such recovery experiences, the cumulative effects of strain can lead to diminished health and well-being (Sonnentag et al., 2017).

Consistent with the effort–recovery model, a substantial body of research demonstrates that vacations help employees recover and protect their health and well-being. In one of the first studies on this topic, Lounsbury and Hoopes (1986) found that employees who went on vacation showed increases in well-being postvacation compared with a control group of employees who did not take a vacation. Since this study, numerous studies have used a similar design to assess how vacations impact well-being. A meta-analysis summarizing these studies (de Bloom et al., 2009) found that vacations provided significant short-term increases in life satisfaction ($d = .24$) and decreases in exhaustion ($d = .55$) and physical health complaints ($d = .68$).

Other research has focused on the long-term effects of taking vacation. Several longitudinal studies have shown that employees who take fewer vacation days (compared with those who take more vacation days) have a higher risk of later health problems. For instance, one study showed that employed women who take fewer vacations have a higher 20-year incidence of myocardial infarction or coronary death, controlling for potentially confounding factors such as age, systolic blood pressure, body mass index, diabetes, smoking, education, and occupation (Eaker, Pinsky, & Castelli, 1992). Other studies have shown that people who take fewer vacations have increased mortality rates 9 years later (sample: middle aged-men; Gump & Matthews, 2000), 26 years later (sample: men in business jobs; Strandberg, von Bonsdorff, Strandberg, Pitkälä, & Räikkönen, 2017), and 40 years later (sample: men in business jobs; Strandberg et al., 2018). These effects hold even when controlling for potentially confounding factors such as income, health-related behaviors (e.g., smoking, alcohol use, and work hours), and baseline health indicators (e.g., cholesterol, blood pressure, body mass index).

Understanding Unused Vacation Days

Despite the important consequences of vacations for health and well-being, many people do not use all of their vacation days (Matos, 2014; Society for Human Resource Management, 2017). Further, even when people do use their paid vacation days, they sometimes use those days for nonrecuperative activities other than vacation (Fakih, 2018; Matos, 2014), thus likely failing to derive the health and well-being benefits afforded by using those days for vacation. Given the importance of vacations for health and well-being, the tendency for employees to not use their vacation days—or to not use those days for vacation—is a concerning phenomenon.[1]

Previous research has explored predictors of employees' unused vacation days, focusing primarily on demographic and job-related

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[1] Unused vacation days are likely particularly problematic for the well-being of employees who have fewer vacation days available. Whereas employees with substantial amounts of vacation time may suffer fewer negative consequences as a result of not using all of their allotted vacation time, employees with less vacation time are likely particularly damaged by not using that time.

variables. This research has shown that, employees who are older (Fakih, 2018; Hilbrecht & Smale, 2016), female (Maume, 2006), married or living with a partner (Altonji & Usui, 2007; Fakih, 2018; Hilbrecht & Smale, 2016), have kids at home (Hilbrecht & Smale, 2016), and have higher socioeconomic status (i.e., higher education and/or income; Hilbrecht & Smale, 2016) tend to use more of their paid vacation days. Regarding job-related factors, employees who work longer hours tend to use fewer vacation days (Maume, 2006), and employees with longer job tenure tend to use more vacation days (Maume, 2006). Although these results are helpful in emphasizing the types of employees who may be particularly prone to not fully using their paid vacation days, what remains unclear is *why* employees do not use their paid vacation days.

Social Cognitive Theory as an Underlying Framework

To identify psychological factors that explain employees' use of their vacation days, we use social cognitive theory (Bandura, 2001)—a framework commonly used to understand behaviors related to health and well-being. As social cognitive theory has garnered strong support in predicting other domain-specific behaviors that are relevant to health and well-being (Stacey, James, Chapman, Courneya, & Lubans, 2015; Zhang, Zhang, Schwarzer, & Hagger, 2019), it is a useful theoretical perspective for explaining why employees often do not fully use their paid vacation days.

social cognitive theory emphasizes two main cognitive factors that predict domain-specific behaviors: self-efficacy and outcome expectations (Bandura, 1986; Lent & Brown, 2006). *Self-efficacy* refers to "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). People's *outcome expectations* are their beliefs about the consequences of performing a specific behavior—that is, the positive benefits or negative consequences they think will occur if they engage in a specific behavior (Bandura, 1986; Lent & Brown, 2006). Together, domain-specific self-efficacy and outcome expectations are the cognitive determinants of domain-specific behavior in social cognitive theory.

A Social Cognitive Perspective on Unused Vacation Days

Relevant aspects of self-efficacy. In social cognitive theory, domain-specific self-efficacy is an important antecedent of successful domain performance. To determine appropriate domain-specific self-efficacy constructs for a specific domain, Bandura (2005) recommends consulting relevant literature to identify controllable factors (e.g., specific behaviors, thought processes) that are important prerequisites for successful performance of the outcome of interest. Domain-specific self-efficacy is then conceptualized as the belief in one's abilities to engage in those controllable factors (Bandura, 2005).

Following Bandura's recommendations, we drew on Eden's (2001) work on vacations to identify controllable factors that are important for taking vacation. This work suggests that taking a vacation generally functions to give people time away from work demands. As such, employees are likely to see vacations as worth engaging in—and thus to be motivated to go on vacation—to the extent that they think they can actually accomplish the purpose of

getting away from (i.e., detaching from) work demands during vacations. Thus, believing that one can detach from work-related activities and thoughts while on vacation is likely an important prerequisite of actually going on vacation. Further, because previous work has shown that detachment is at least somewhat malleable (Hahn, Binnewies, Sonnentag, & Mojza, 2011), it fits within the social cognitive framework as a likely controllable factor.

Therefore, we focused on detachment as a relevant controllable behavioral factor and conceptualized detachment self-efficacy as the extent to which employees believe that they can successfully detach or disconnect from work while on vacation. We propose that low levels of detachment self-efficacy will be an important factor predicting employees' unused vacation days. That is, if employees do not believe they will be able to refrain from job-related activities and thoughts during vacation, then they will be less motivated to go on vacation.

We chose to focus on detachment self-efficacy rather than recovery-related self-efficacy ("an individual's expectation of being able to benefit from recovery time and recovery opportunities," p. 202; Sonnentag & Kruel, 2006)—a domain-specific self-efficacy construct that is potentially relevant to taking vacation—because of concerns that recovery-related self-efficacy incorporates aspects of self-efficacy and outcome expectations. Because recovery is conceptualized as both a process that occurs during recovery-related outcomes such as vacations and as an outcome of recovery-related activities (Sonnentag et al., 2017), we did not feel that is was feasible to conceptualize recovery-related self-efficacy as a domain specific self-efficacy that was clearly distinct from outcome expectations. However, because detachment is commonly conceptualized as a behavior that precedes engaging in recovery-related activities (ten Brummelhuis & Trougakos, 2014), we felt it was a better aligned with Bandura's recommendation to focus self-efficacy constructs on factor that are likely important prerequisites of taking vacation.

Relevant outcome expectations. Within a social cognitive framework, domain-specific behavior is a function not only of domain-specific self-efficacy but also of outcome expectations—beliefs about the likely consequences of engaging in the behavior. Specifically, social cognitive theory holds that people are more likely to engage in behaviors that they expect will lead to desirable outcomes and less likely to engage in behaviors that they expect will lead to undesirable outcomes (Bandura, 1986). Although Bandura (1986) identified some general types of outcome expectations that are common across domains—expectations of interpersonal outcomes (e.g., approval), self-evaluative outcomes (e.g., self-satisfaction), and physical or tangible outcomes (e.g., financial)—he emphasized that specific outcome expectations must be determined for the specific domain or behaviors of interest.

Because outcome expectations often cover a much wider range of constructs, which are often not readily identifiable using relevant theoretical and empirical literature, it is common to identify outcome expectations using an inductive approach (Bandura, 2005; Hinkin, 1998; Lent & Brown, 2006). Although relevant literatures did lead us to identify certain categories of outcome expectations that would likely be salient, we did not use these expectations as the sole basis of our conceptualization of relevant outcome expectations, but rather used an inductive approach to identify the most relevant outcome expectations (Study 1). In what follows, we draw on relevant literature to identify some of the

likely types of outcome expectations associated with taking vacations.

Consistent with Bandura's focus on interpersonal outcomes, we expect that one reason employees may not use their vacation is because of the anticipated negative reactions of their supervisors or peers. Although the perceived interpersonal consequences of nonwork decisions have not been studied in the context of vacation, they have been studied in the broader work–life literature (Ladge & Little, 2019). Specifically, studies have shown that employees are often hesitant to use certain benefits intended to help improve work–life balance (e.g., parental leave, flexible work arrangements) because of how they will be perceived by their peers if they do so (Perrigino et al., 2018; Thompson, Beauvais, & Lyness, 1999). These concerns are thought to be caused by explicit or implicit expectations to conform to ideal worker norms—that is, expectations that employees will be constantly available for work and prioritize work above other aspects of life (Williams, Blair-Loy, & Berdahl, 2013). We suggest that this hesitancy to use benefits because of perceived interpersonal outcomes likely also applies to using vacation days.

Although employees are motivated to maintain positive impressions with their colleagues, they are also motivated to sustain positive relationships with their families outside of work (ten Brummelhuis & Bakker, 2012). Because vacations provide an opportunity for extended quality time with family members or friends—89% of participants report going on vacation with one's family, partner, or friends (Strauss-Blasche, Ekmekcioglu, & Marktl, 2000)—the anticipation of these interpersonal benefits likely also motivates many employees to go on vacation.

Bandura also emphasized self-evaluative outcome expectations, and such evaluations are likely relevant for taking vacations. Being successful at work is an important component of employees' self-evaluations (Ferris, Lian, Brown, & Morrison, 2015; Ferris, Lian, Brown, Pang, & Keeping, 2010), and employees may feel that going on vacation will detract from valuable time that could be used to achieve work-related goals. Achieving such goals contributes not only to making a positive impression on others but also to feeling good about one's own professional accomplishments. Thus, we expect that employees' expectations about the negative consequences of vacations on their productivity will impact their use of vacation days.

Self-evaluations also hinge on how people feel they are performing in key relational roles (e.g., family roles; Leary & Baumeister, 2000; Rothbard, 2001). Because vacations often offer an extended amount of meaningful time with loved ones, not going on vacation could have negative implications for how an employee views his or her performance as a spouse or parent. Thus, to the extent that employees believe that going on vacation with their family will make them feel like a good spouse or parent, they may be more likely to go on vacation.

Lastly, Bandura noted the influence of tangible outcome expectations on one's behavior—the most relevant in the context of vacations being money (Decrop, 2000). Many employees may not have sufficient discretionary income to afford vacation. For employees who have more discretionary income, going on vacation may be seen as interfering with other important financial goals (e.g., paying off debts, saving for a down payment or other large purchase, college savings). In addition, some employees may be dependent on receiving extra compensation for unused paid vaca-

tion days—a benefit offered by many organizations (Society for Human Resource Management, 2017). Thus, we expect the perceived negative financial consequences of taking vacation will factor into the decision to take vacation such that people will be less likely to take vacation if they think doing so will have negative financial consequences.

Although we do anticipate identifying outcome expectations consistent with those highlighted by Bandura—expectations of social or interpersonal outcomes (e.g., approval), self-evaluative (e.g., self-satisfaction), and of physical or tangible outcomes (e.g., financial)—we also expect that our inductive approach will reveal additional outcome expectations that are important for predicting employees' unused vacation days.

Summary of Present Studies

In sum, we expect that employees' use of their vacation days is impacted by their detachment self-efficacy and their expectations of positive and negative outcomes associated with vacations. To examine our explanation, we developed and validated measures of these constructs and examined whether they predicted employees' use of their annual paid vacation days. The purpose of Study 1 was to identify common dimensions of employees' outcome expectations for vacations and develop an initial item pool to assess these dimensions. In Studies 2 and 3, we conducted exploratory and confirmatory analyses to assess and finalize the items. In Study 4, using two waves of data, we examined whether the newly developed social cognitive variables predicted employees' unused vacation days.

Method

Studies 1–3: Developing Measures

Study 1. The purpose of Study 1 was to identify common outcome expectations employees have about taking vacations. To do so, we asked a sample of full-time employees from a variety of industries about the outcomes they expect from taking vacations. We then used this information to identify key positive and negative outcome expectations (for similar approaches, see Bennett & Robinson, 2000; Mitchell, Baer, Ambrose, Folger, & Palmer, 2018). This type of inductive approach is appropriate: (a) when available theory on a topic is insufficient for clarifying relevant aspects of a phenomenon and (b) when those aspects can be readily identified by participants (Edmondson & McManus, 2007; Gill, 2014; Hinkin, 1998), as is the case for outcome expectations for a vacation. Because we conceptualized detachment self-efficacy a priori, as is common when conceptualizing domain-specific measures of self-efficacy (Riggs, Warka, Babasa, Betancourt, & Hooker, 1994; Sonnentag & Kruel, 2006), the inductive approach was necessary only for the outcome expectations.

Participants. We recruited participants using Amazon Mechanical Turk (MTurk). MTurk was an appropriate platform for recruiting participants, as we were interested in sampling from a range of industries. We included salaried, full-time employees who live in the United States and receive paid vacation days. To ensure data quality, we limited participants to individuals with a 98% or higher approval rate and over 500 completed tasks (Cheung, Burns, Sinclair, & Sliter, 2017). Out of 99 total respondents, we

retained 89 respondents who passed the attention checks and provided usable data. Participants were 59.6% male and 73% White, with a mean age of 37.26 ($SD = 10.23$).

Procedures. Participants responded to two prompts asking them to list important positive and negative outcomes they would expect from taking a vacation. Participants generated a total of 658 responses regarding their positive (353) and negative (305) expectations for taking a vacation.

Analyses and results. To identify important types of outcome expectations from the open-ended answers, we used a general inductive coding approach called independent parallel coding (Thomas, 2006). Using this approach, three researchers independently organized the open-ended responses into their own meaningful categories. Following independent coding, the coders discussed their categories and agreed on six categories of positive outcome expectations (being relaxed, feeling refreshed[2], having fun, gaining perspective, connecting with loved ones, and making progress on personal priorities and projects) and seven categories of negative outcome expectations (i.e., experiencing stress while planning the vacation, experiencing stress during the vacation, being perceived as less committed by supervisors and/or colleagues, burdening coworkers, falling behind at work, falling behind in housework, and experiencing negative financial consequences).

Item generation. Having identified preliminary outcome expectation dimensions, we then generated item pools for each of the individual dimensions (Hinkin, 1998). Dimension definitions and sample items are reported in Table 1. This item-generation process resulted in a total of 11 items for detachment self-efficacy, 77 items for positive outcome expectations, and 87 items for negative outcome expectations. To confirm each item was consistent with its intended dimension definition (and not any of the other dimensions), we conducted item content validity analyses (see File S1 in the online supplemental materials for details). After problematic items were removed, our item pool contained 11 items for detachment self-efficacy, 66 items for positive outcome expectations dimensions, and 72 items for negative outcome expectations dimensions.

Study 2.

Participants. To examine the structure of the initial item pool, we recruited 379 participants through MTurk. Again, to ensure data quality, we limited the sample to individuals in the United States, who had at least a 98% approval rate and had completed over 500 previous HITs. To ensure respondents had the same characteristics as employees that we would focus on in subsequent studies, we only included participants who: (a) had paid vacation days that were based on the calendar year (i.e., starting in January) and separate from sick days and (b) had the same place of employment since January 2017. We excluded participants who participated in Study 1. Of 379 respondents, 316 responded correctly to all attention checks and provided usable data (53.0% male, 82.8% White, mean age = 38.8 [$SD = 10.6$]). Respondents represented a wide range of industries, most commonly professional, scientific, and technical services (12.6%) and finance and insurance (12.0%).

Measures.

Self-efficacy items. These 11 items assessed the extent to which employees believe that they can successfully detach or disconnect from work while on vacation (e.g., "I can leave work at work while on vacation."). Participants answered on a 7-point Likert scale ranging from 1 (*not at all confident*) to 7 (*totally confident*).

Outcome expectations. These 66 items assessed the extent to which individuals believed they would experience six positive outcomes if they took a vacation (being relaxed, feeling refreshed, having fun, gaining perspective, connecting with loved ones, and making progress on personal priorities and projects). A total of 72 items assessed the extent to which individuals believed they would experience seven negative outcomes if they took a vacation (experiencing stress while planning the vacation, experiencing stress during the vacation, being perceived as less committed by supervisors and/or colleagues, burdening coworkers, falling behind at work, falling behind in housework, and negative financial consequences). Participants answered on a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Sample items from the final scale are shown in Table 1.

Results. We conducted an exploratory factor analysis of the 149 items using maximum likelihood estimation and direct oblimin rotation. We determined the number of factors to retain by considering the number of factors with eigenvalues >1 and the scree plot (El Akremi, Gond, Swaen, De Roeck, & Igalens, 2018; O'Neill & Sevastos, 2013; Sliter, 2013; Yoshikawa, Wu, & Lee, 2020). Our initial exploratory factor analysis resulted in the extraction of 18 factors. We found that the positive outcome expectation dimension of "feeling refreshed" loaded on a single factor with "being relaxed." This was not particularly surprising, as these constructs were very similar. Further, although all of the relaxed items loaded onto a single factor, several of the refreshed items loaded on the refreshed dimension or cross-loaded on the relaxed dimension and other dimensions. Thus, we decided to remove the 11 "feeling refreshed" items to obtain a clearer factor structure. This reduced the number of factors to 17.

We then iteratively removed items that loaded lower than .40 on the relevant factor and/or had a cross-loading greater than .30 (Reise, Waller, & Comrey, 2000). This process eliminated three uninterpretable factors, resulting in a 14-factor solution, reflecting detachment self-efficacy, five positive outcome expectations, seven negative outcome expectations, and one uninterpretable factor. We iteratively removed items that loaded onto the uninterpretable factor, resulting in a 13-factor structure of 105 items.

To reduce the item pools for each dimension to a desirable number of three to six items (Stanton, Sinar, Balzer, & Smith, 2002), we eliminated additional items based on internal and judgmental item qualities (Stanton et al., 2002). This approach is recommended to avoid an overreliance on maximizing internal consistency as an item reduction strategy—an approach that can lead to item redundancies and diminished representativeness of the construct space. First, we examined internal item qualities (e.g., means, variance, and kurtosis) and removed five items that had high means and high kurtosis—indicators of restricted variability. Finally, we examined item content, a component of judgmental item quality (Stanton et al., 2002), to reduce the number of redundant items in each dimension. Within each dimension, we identified pairs and triads of items that were semantically similar

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[2] This dimension was ultimately eliminated because it was empirically indistinguishable from being relaxed.

Table 1
Construct Labels and Definitions

Construct	Definition	Example item	No. of final items	Study 2 α reliability
Detachment self-efficacy	The extent to which employees believe that they can successfully detach or disconnect from work while on vacation	"I can leave work at work while on vacation."	6	.94
Positive outcome expectations				
Expectations of feeling relaxed	The extent to which employees expect to feel a state of relaxation during vacation	"I will feel relaxed if I take a vacation."	4	.94
Expectations of having fun	The extent to which employees expect to experience enjoyment and have fun on their vacations	"Taking a vacation will be exciting."	4	.92
Expectations of gaining perspective	The extent to which employees expect better perspective of their values and life's purpose	"If I go on vacation, I will better understand my life's purpose."	4	.96
Expectations of connecting with loved ones	The extent to which employees expect quality time with family and friends	"Going on vacation will help me feel connected to people I care about."	4	.91
Expectations of making progress on personal priorities and projects	The extent to which employees expect to be able to catch up or make progress on personal projects or tasks	"Taking a vacation will allow me to catch up on personal tasks."	4	.91
Negative outcome expectations				
Expectations of experiencing stress while planning the vacation	The extent to which employees expect that planning the vacation will be stressful	"If I take a vacation, the planning process will be frustrating."	6	.94
Expectations of experiencing stress during the vacation	The extent to which employees expect stress and anxiety during the vacation itself	"During vacation, I will be worried."	4	.94
Expectations of negative perceptions from coworkers or supervisors	The extent to which employees anticipate supervisors and/or colleagues perceiving them as less committed and hard working	"My supervisors will think I am not a committed worker if I go on vacation."	5	.95
Expectations of burdening coworkers	The extent to which employees expect negative consequences for their coworkers	"If I take a vacation, the people I work with will be burdened."	4	.91
Expectations of falling behind at work	The extent to which employees expect to fall behind at work	"I will not finish all of my work if I take a vacation."	4	.89
Expectations of falling behind in housework	The extent to which employees anticipate falling behind in housework and chores	"If I take a vacation, I will fall behind on household chores."	3	.94
Expectations of negative financial consequences	The extent to which employees expect a negative impact on their finances	"If I take a vacation, I will not be able to afford other things."	5	.91

Note. The full set of final items are shown in File S2 in the online supplemental materials. This table does not include the "refreshed" dimension from Study 1, as it was removed for psychometric reasons in Study 2.

and retained the item with the highest loading. This process resulted in removing 43 redundant items (57 items remaining). Descriptive statistics for the reduced scales are shown in Table 2. All measures displayed good reliability ($\alpha \geq .89$). The final set of items is shown in the File S2 in the online supplemental materials.

Study 3.

Participants. In order to confirm the factor structure of our measures, we recruited participants through MTurk, limiting the sample to individuals in the United States who had at least a 98% approval rate, had completed over 500 previous tasks, and had not participated in previous studies. As with Study 2, participants were included only if they: (a) had paid vacation days that were based on the calendar year (i.e., starting in January) and separate from sick days and (b) had the same place of employment since January 2017. A total of 372 participants provided usable data (54% male, 75% White, mean age = 38.4 [SD = 10.7]). Respondents were

from a variety of industries, most commonly professional, scientific, and technical services (14.5%) and finance and insurance (11%).

Measures. We used the items retained from Study 2 for detachment self-efficacy (six items), positive outcome expectations (20 items), and negative outcome expectations (31 items). Participants responded to items on a 7-point Likert scale for both self-efficacy, ranging from 1 (*not at all confident*) to 7 (*totally confident*), and outcome expectations, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Descriptive statistics and correlations for Study 3 variables are shown in Table 3. All of the social cognitive measures displayed good reliability ($\alpha \geq .84$).

Confirming the factor structure. We conducted confirmatory factor analyses in Mplus Version 7.4 (Muthén & Muthén, 1998–2017) using maximum likelihood estimation and 1,000 bootstrapped confidence intervals. Before testing the full measurement model, we first compared one- and two-dimensional models

Table 2
Means, Standard Deviations, and Alpha Reliabilities—Study 2

Variable	M	SD	α
Detachment self-efficacy	5.70	1.44	.94
Positive outcome expectations			
Expectations of feeling relaxed	6.02	1.07	.94
Expectations of having fun	6.02	0.99	.92
Expectations of gaining perspective	5.05	1.54	.96
Expectations of connecting with loved ones	5.96	1.03	.91
Expectations of making progress on priorities	4.97	1.44	.91
Negative outcome expectations			
Expectations of planning stress before vacation	2.39	1.35	.94
Expectations of stress during vacation	2.06	1.24	.94
Expectations of negative perceptions from coworkers or supervisors	1.92	1.08	.95
Expectations of burdening coworkers	2.90	1.45	.91
Expectations of falling behind at work	2.52	1.36	.89
Expectations of falling behind in housework	2.68	1.56	.94
Expectations of negative financial consequences	2.97	1.43	.91

Note. $N = 316$. Response options for all items ranged from 1 to 7.

for positive emotional expectations (feeling relaxed, having fun) and negative emotional expectations (experiencing stress while planning the vacation, experiencing stress during the vacation). For each, the two-dimension solution showed better fit, as indicated by a significant decrease in χ^2, higher comparative fit index (CFI) and Tucker–Lewis index (TLI) values, and lower standardized root mean residual (SRMR) and root mean square error of approximation (RMSEA) values. We then conducted a confirmatory factor analysis to examine the entire model (detachment self-efficacy, the five positive outcome expectation dimensions, and the seven negative outcome expectation dimensions). The full measurement model displayed acceptable fit (Hu & Bentler, 1999), $\chi^2 = 2625.15$, $df = 1461$, CFI = 0.93, TLI = 0.93, SRMR = 0.04, RMSEA = 0.05. All standardized item loadings exceeded 0.60.

Discussion: Studies 1–3. Across three studies, we identified and developed measures to assess key social cognitive constructs (i.e., detachment self-efficacy, outcome expectations) that likely function as important antecedents of employees' unused vacation days. After conducting exploratory and confirmatory factor analyses, our final measures consisted of detachment self-efficacy, five

positive outcome expectations (i.e., feeling relaxed, having fun, gaining perspective, connecting with loved ones, and making progress on personal priorities and projects) and seven negative outcome expectations (i.e., experiencing stress while planning the vacation, experiencing stress during the vacation, being perceived as less committed by supervisor and/or colleagues, burdening coworkers, falling behind at work, falling behind on housework, and experiencing negative financial consequences). These measures displayed good psychometric properties, including high reliability and good fit in an overall measurement model.

Study 4

The primary goal of Study 4 was to test our social cognitive predictors of employees' unused paid vacation days. We predicted that employees' unused vacation days would be explained by their lack confidence in their ability to detach and their expectations about outcomes that will result from taking vacation. Two additional goals of Study 4 were to: (a) evaluate the measurement validity (i.e.,

Table 3
Descriptive Statistics and Correlations Among Study Variables—Study 3

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Detachment self-efficacy	5.26	1.46	*.93*												
Feeling relaxed	5.82	0.99	.49	*.87*											
Having fun	5.91	0.90	.39	.74	*.84*										
Gaining perspective	5.16	1.22	.19	.49	.53	*.90*									
Connecting with loved ones	5.79	0.98	.18	.54	.58	.51	*.85*								
Making progress on priorities	4.87	1.19	.10	.24	.14	.32	.20	*.80*							
Experiencing stress while planning	2.90	1.40	−.28	−.47	−.40	−.10	−.18	.03	*.93*						
Experiencing stress during the vacation	2.51	1.35	−.42	−.60	−.50	−.17	−.28	−.02	.77	*.90*					
Being perceived negatively	2.30	1.33	−.28	−.37	−.37	−.08	−.31	.06	.56	.67	*.95*				
Burdening coworkers	3.22	1.47	−.32	−.32	−.29	−.06	−.18	.04	.52	.55	.60	*.92*			
Falling behind at work	2.94	1.44	−.40	−.43	−.41	−.08	−.24	.07	.64	.70	.63	.68	*.88*		
Falling behind with housework	3.26	1.53	−.24	−.27	−.19	.05	−.12	−.01	.59	.58	.44	.47	.59	*.90*	
Experiencing negative financial consequences	3.54	1.29	−.29	−.32	−.25	−.03	−.12	−.03	.61	.61	.50	.53	.62	.60	*.86*

Note. $N = 372$. Correlations $\geq |0.11|$ are significant at $p < .05$. Correlations $\geq |0.14|$ are significant at $p < .01$. Cronbach's αs are presented in italics on the diagonal.

convergent and discriminant validity) of our scales and (b) to further evaluate the psychometric properties of our scales.

To evaluate the measurement validity of our scales, we assessed the extent to which our detachment self-efficacy scale exhibited convergent validity with conceptually similar scales, expecting negative correlations with work addiction (Schaufeli, Shimazu, & Taris, 2009) and work-related rumination (Querstret & Cropley, 2012). We anticipated that employees with high levels of work addiction and work-related rumination would experience lower levels of detachment self-efficacy. However, we also expected detachment self-efficacy to be distinct from these constructs. Although work addiction or ruminative tendencies may be important factors that commonly impact detachment self-efficacy, they are likely not redundant constructs, as low detachment self-efficacy may arise as a function of numerous causes other than work addiction and rumination (e.g., a lack of assertiveness in setting boundaries). We also expected detachment self-efficacy to be distinct from job self-efficacy, as they refer to confidence in different domains.[3]

We also tested convergent and discriminant validity for positive and negative outcome expectations by examining whether these dimensions were distinct from—yet related to—positive and negative affectivity (Watson, Clark, & Tellegen, 1988). That is, although we expected people with high levels of positive affectivity to report expecting higher levels of positive outcome expectations and people with higher levels of negative affectivity to report higher levels of negative outcome expectations, we expected our outcome expectation scales to be distinct from these measures of dispositional affectivity.

Method. To examine whether our proposed social cognitive predictors explained employees' unused vacation days, we conducted a time-separated study with social cognitive variables, variables used to establish measurement validity, and controls measured at Time 1 (December 2018) and information about use of vacation days measured ~2 weeks later (January 2019). Temporal separation of our predictors and outcomes helped reduce concerns about common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Participants and procedures. We recruited participants from a wide range of industries through Qualtrics Panels. We limited the sample to full-time employees in the United States who: (a) had paid vacation days that were separate from sick days and personal days and (b) had the same place of employment since January 2018. Participants were removed from the sample if they failed to correctly complete an attention check item in either wave. We collected data from 1,400 participants at Wave 1 and 815 participants at Wave 2 (retaining 58.2% from Wave 1).[4] Respondents were compensated after each wave. Respondents chose from among several compensation options, including gift cards and cash.

Wave 1 measures.

Social cognitive variables. Items are shown in the File S2 in the online supplemental materials. The detachment self-efficacy items (six items) were on a 7-point Likert scale, ranging from 1 (*not at all confident*) to 7 (*totally confident*), and the outcome expectation items (20 positive outcome expectation items and 31 negative outcome expectation items) were on a 7-point Likert scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Means and reliabilities for Study 4 scales are shown in Table 4. All of the social cognitive measures displayed good reliability ($\alpha \geq .90$).

Convergent and discriminant validity scales. Work addiction was measured with 10 items that assessed the extent to which participants report working excessively and compulsively (e.g., "I find myself still working after my coworkers have stopped working", Schaufeli et al., 2009). Responses range from 1 (*strongly disagree*) to 7 (*strongly agree*). Work-related rumination was measured using two dimensions of the Work-Related Rumination Questionnaire (Querstret & Cropley, 2012): Work-Related Affective Rumination (e.g., "Are you troubled by work-related issues when not at work?") and Work-Related Problem-Solving Pondering (e.g., "After work, I tend to think about how I can improve my performance"). Responses ranged from 1 (*never*) to 6 (*frequently*). Job self-efficacy was measured using the Personal Efficacy Beliefs Scale (Riggs et al., 1994). This 10-item measure assessed the extent to which one felt confident about their ability to perform their job (e.g., "I have confidence in my ability to do my job"). Responses ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Positive and negative affectivity were measured using the Positive and Negative Affect Schedule (Watson et al., 1988). This 20-item measure assesses the extent to which people feel specific positive emotions (e.g., "enthusiastic," "interested") and negative emotions (e.g., "distressed," "nervous") in general. Responses range from 1 (*very slightly or not at all*) to 5 (*extremely*).

Control variables. Control variables included variables that have been shown to predict usage of vacation days in previous studies (Fakih, 2018; Hilbrecht & Smale, 2016; Maume, 2006). This included marital status, gender, age, parental status, typical weekly work hours, job tenure (years and months), and household income (12 categorical options ranged from less than $10,000/year to over $150,000/year).

Wave 2 measures.

Paid vacation days given in 2018. To assess how many paid vacation days participants received during 2018, we asked the following: "How many paid vacation days were you given during 2018 (from January 1st, 2018, to December 31st, 2018)?".[5] Because of concerns about whether participants' reports of this

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[3] We note that we assessed the relationship between detachment self-efficacy and recovery-related self-efficacy in Study 2 and found a latent variable correlation of $r = 0.06$.

[4] We examined whether participant attrition was nonrandom (Goodman & Blum, 1996). To statistically assess the nonrandom sampling at Wave 2, we conducted a multiple logistic regression that regressed a dichotomous (*continuous*) variable distinguishing between participants who responded to both Waves 1 and 2 (stayers, coded as 1) and those who responded to only Wave 1 (leavers, coded as 0) onto the social cognitive variables and demographic variables as predictors. We found no significant predictors of attrition of the social cognitive variables ($ps > .05$). We did, however, find that both age and income significantly predicted whether participants completed the second wave. Older participants (*estimate* = .01, $p < .05$) and those with a lower income (*estimate* = −.06, $p < .05$) were more likely to complete Wave 2.

[5] Participants were provided the following prompt available to them while answering the following questions: "For your responses to the following questions, paid vacation days means paid time off from work that does NOT include sick days, personal days, or holidays such as Thanksgiving or New Year's Day." We wanted to ensure that all participants understood the term 'paid vacation' in the same way, so it was necessary to clarify that it did not include sick days, personal days, or holidays. We excluded holidays because we were interested in capturing the paid vacation days that employees chose to use, and holidays are often mandatory days away from work when the office is closed. Further, as noted by others, holidays often do not share the same psychological characteristics as vacations (Hruska, Pressman, Bendinskas, & Gump, 2020).

Table 4
Descriptive Statistics and Correlations Among Study Variables—Study 4

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Paid vacation days given	17.23	7.32																					
2. Policy of losing vacation days (1 = lose days)	0.31	0.46	.02																				
3. Detachment SE	5.43	1.73	-.12	-.01	.96																		
4. Relaxed	6.00	1.02	-.04	.00	.38	.95																	
5. Having fun	5.90	0.99	-.07	.04	.23	.66	.92																
6. Perspective	5.36	1.30	-.07	-.03	.11	.40	.61	.95															
7. Loved ones	5.62	1.21	-.02	.02	.06	.35	.51	.55	.93														
8. Making progress	4.97	1.44	-.08	-.05	-.10	.10	.12	.21	.25	.93													
9. Planning stress	3.17	1.48	-.13	-.01	-.12	-.26	-.27	-.11	-.12	.00	.93												
10. Stress during	2.04	1.28	-.11	-.02	-.26	-.51	-.45	-.20	-.22	.06	.56	.95											
11. Perceptions of colleagues	2.04	1.45	-.15	-.02	-.22	-.36	-.23	-.02	-.11	.05	.41	.51	.97										
12. Burdening coworkers	3.34	1.75	-.09	.04	-.24	-.23	-.13	-.04	.00	.12	.27	.37	.52	.96									
13. Falling behind at work	3.06	1.65	-.05	.01	-.42	-.37	-.23	-.07	-.11	.08	.38	.46	.53	.59	.94								
14. Falling behind on housework	3.21	1.51	-.11	-.02	-.16	-.27	-.20	-.03	-.09	.08	.47	.49	.38	.34	.44	.90							
15. Financial consequences	2.91	1.46	-.17	-.02	-.03	-.18	-.13	-.02	-.07	.11	.38	.38	.40	.34	.42	.37	.92						
16. Job self-efficacy	6.12	0.80	.07	-.03	.10	.31	.31	.23	.22	.07	-.18	-.27	-.19	-.10	-.16	-.15	-.15	.86					
17. Work addiction	4.46	0.98	-.11	-.01	-.35	-.19	-.03	.08	.06	.21	.24	.28	.34	.39	.46	.25	.22	.06	.79				
18. Affective rumination	3.12	1.20	-.05	.03	-.41	-.29	-.18	-.05	-.05	.07	.31	.38	.40	.41	.52	.33	.29	-.23	.45	.94			
19. Problem-solving pondering	3.49	1.06	-.08	.00	-.42	-.24	-.07	.06	.04	.13	.17	.28	.31	.32	.40	.21	.14	-.08	.50	.56	.87		
20. Positive affectivity	3.57	0.80	-.06	-.07	.03	.28	.43	.40	.33	.19	-.17	-.22	-.06	-.07	-.12	-.08	-.10	.50	.16	-.21	.15	.92	
21. Negative affectivity	1.61	0.61	-.11	-.01	-.15	-.25	-.16	-.02	-.08	.10	.34	.42	.34	.29	.34	.28	.30	-.31	.29	.49	.24	-.23	.91
22. Unused vacation days	6.09	6.74	.37	-.07	-.19	-.23	-.19	-.15	-.15	.02	.10	.11	.11	.09	.17	.06	.09	-.08	.16	.19	.06	-.16	.14

Note. N = 660. SE = self-efficacy. Correlations ≥|0.08| are significant at $p < .05$. Correlations ≥|0.10| are significant at $p < .01$. Cronbach's αs are presented in italics on the diagonal.

information was accurate, we asked participants: "How confident are you that your previous response accurately reflects the number of paid vacation days you were given?". Responses ranged from 1 (*not at all confident*) to 5 (*extremely confident*). As described in the data cleaning section in the following text, we removed participants who were not at all confident (a), slightly confident (b), or somewhat confident (c) that the number of paid vacation days they reported in the survey was accurate.

Paid vacation days used in 2018. To assess how many paid vacation days participants used during 2018 we asked the following: "From January 1st to December 31st, 2018, how many paid vacation days did you use?". Because employees often use some of their vacation days for other purposes (e.g., doctor's appointments, taking care of sick family members, and other nonvacation activities; Fakih, 2018) that likely do not confer the same benefits as vacation, we asked an additional question to determine employees' days used for vacation using the prompt: "Sometimes people use their paid vacation days for things other than vacation. How many of those paid vacation days used in 2018 were used for vacation?".

Paid vacation day policy. In addition to the control variables previously discussed, we also collected information on whether employees lost their unused paid vacation days or if they could retain or be paid for these days—a factor researchers have emphasized as potentially impacting use of vacation days (Fakih, 2014; Hilbrecht & Smale, 2016). To assess this, we asked the following: "If you do not use all of your paid vacation days by the end of the year, which of the following does your company allow you to do?" Participants were asked to select which of the following would occur if they had unused paid vacation day: (a) you can be paid out for unused days, (b) you can bank unused days (e.g., for parental leave, retirement, etc.), (c) you can roll over some unused days to the next year, (d) you can roll over all unused days to the next year, (e) you lose all unused days at the end of the year, (f) you can donate unused days to other employees, (g) you do not know, and (h) other. We coded this variable such that 1 reflected having a "use it or lose it" policy (Option e above) and 0 reflected not having such a policy. Consistent with the phenomenon of loss aversion (Tversky & Kahneman, 1991), we anticipated that employees would be more motivated to use their paid vacation days if they had a "use it or lose it" policy.

Data cleaning. To reduce concerns about the accuracy of reporting the number of paid vacation days given, we removed 84 participants (10.3%) who were only slightly, somewhat, or not at all confident that the number of paid vacation days they reported in the survey was accurate. We removed an additional 71 additional participants were because their data was unusable or contained outliers.[6] After data cleaning, we had a final sample of 660 participants (42.6% male; 63.0% married or living with a partner; 81.8% White, mean age = 46.9 [SD = 12.2], 67.7% parents). Participants reported an average household income of 8.52 (SD = 2.69) where 8 referred to \$70,000–\$79,999 and 9 referred to \$80,000–89,999. Respondents reported working an average of 41.92 hr per week (SD = 4.69) and represented a wide range of industries including government (13.4%), educational services (13.0%), health care and social assistance (11.9%), manufacturing (10.7%), finance and insurance (9.3%), retail trade (7.7%), and others (<7% each). Average job tenure was 11.97 years (SD =

10.18). Descriptive statistics and correlations among study variables for the final usable sample are shown in Table 4.

Results.

Confirmatory factor analysis. We conducted a confirmatory factor analysis to examine whether the 13-dimension confirmatory factor analysis from Study 3 would replicate in another sample. The measurement model (13 factors: Detachment Self-Efficacy, five positive and negative outcome expectations, and seven negative outcome expectations) fit well (χ^2 = 3410.33, df = 1461, CFI = 0.95, TLI = 0.95, SRMR = 0.03, RMSEA = 0.05).

Convergent and discriminant validity results. We examined latent variable correlations to evaluate the convergent and discriminant validity of our scales, using maximum likelihood estimation with 1,000 bootstrapped resamples in Mplus 7.4 (Muthén & Muthén, 1998–2017). Consistent with our expectations, detachment self-efficacy correlated negatively with work addiction, $r = -0.35$, $p < .01$, and both subscales of work-related rumination (Affective Rumination, $r = -0.42$, $p < .01$; Problem-Solving Pondering, $r = -0.44$, $p < .01$). When considering discriminant validity, we found a weak but significant association between detachment self-efficacy and job self-efficacy, $r = .09$, $p < .05$. As expected, all five positive outcome expectations correlated positively—but not strongly—with positive affectivity (range of rs = 0.19 to 0.45), and all seven negative outcome expectations correlated positively—but not strongly—with negative affectivity (range of rs = 0.30 to 0.43). These results provide evidence that detachment self-efficacy and outcome expectations converge with, but are distinct from, other variables.

Supplementary discriminant validity analyses. In response to a reviewer's suggestion that detachment self-efficacy may partly reflect job requirements, we conducted additional analyses to determine the extent to which detachment self-efficacy was related to job requirements using job context information obtained in Wave 2. In Wave 2, we included single-item job context measures adapted primarily from O*NET (see Table 5). Although these items were initially included to capture occupational information about our sample, they allowed us to conduct supplementary discriminant validity analyses as suggested by a reviewer. We assessed bivariate correlations between detachment self-efficacy and each work context item to assess discriminant validity. Correlations ranged from $r = -.22$ to .22, suggesting that, although detachment self-efficacy is distinct from work context factors, it does appear to be weakly associated with some of these factors. Thus, detachment self-efficacy likely does not solely reflect an

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[6] We removed 11 participants whose responses had no variance (i.e., all items were answered the same). We removed 10 people whose comments indicated that they were teachers and included their summer vacations in their counts of paid vacation, thus reporting ~100–150 days of vacation. We removed 13 individuals with more than 2 SD above the mean number of vacation days (M = 17.65, SD = 8.68)—that is, people who received more than 35 paid vacation days. We removed 34 participants who used more than 100% of their paid vacation days (i.e., they used more paid vacation days than they were given), as it was unclear whether these responses were erroneous or if participants were reporting a combination of days used from 2018 and roll over days from a previous year. Because negative binomial regression cannot accommodate noninteger dependent variables, we also removed three participants who reported having noninteger unused days (e.g., 1.5 days).

Table 5
Correlations Between Detachment Self-Efficacy and Job Context Variables

Job context variable	Item	Correlation with detachment self-efficacy
Contact with others	How much does this job require you to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it? (1 = *no contact with others* to 5 = *constant contact with others*)	.04
Coordinate or lead others	How important is it to coordinate or lead others in accomplishing work activities in your job? (1 = *not important at all* to 5 = *very important*)	−.15**
Deal with external customers	How important is it to work with external customers or the public in your job? (1 = *not important at all* to 5 = *extremely important*)	−.04
Work with group or team	How important is it to work with others in a group or team in your job? (1 = *not important at all* to 5 = *extremely important*)	−.01
Responsibility for outcomes and results	How responsible are you for outcomes and results of other workers? (1 = *no responsibility* to 5 = *very high responsibility*)	−.15**
Electronic mail	How often do you use e-mail in this job? (1 = *never* to 5 = *every day*)	−.22**
Face-to-face discussions	How often do you have to have face-to-face discussions with individuals or teams in your job? (1 = *never* to 5 = *every day*)	.04
Telephone	How often do you have telephone conversations in your job? (1 = *never* to 5 = *every day*)	−.18**
Time pressure	How often does your job require you to meet strict deadlines? (1 = *never* to 5 = *every day*)	−.14**
Consequence of error	How serious would the result usually be if you made a mistake that was not readily correctable? (1 = *not at all serious* to 5 = *extremely serious*)	−.12**
Freedom to make decisions	How much decision-making freedom, without supervision, does your job offer? (1 = *no freedom* to 5 = *a lot of freedom*)	−.11**
Level of competition	To what extent does your job require you compete or to be aware of competitive pressures? (1 = *not at all competitive* to 5 = *extremely competitive*)	−.22**
Structured versus unstructured work	To what extent is your job structured for you, rather than allowing you to determine tasks, priorities, and goals? (1 = *no freedom* to 5 = *a lot of freedom*)	−.16**
Supervision[a]	In your current position, do you supervise other people? (0 = *no* or 1 = *yes*)	−.21**
Work coverage[a]	Is there someone at your workplace who can temporarily cover most of your work responsibilities? (0 = *no* or 1 = *yes*)	.22**

Note. N = 636.
[a] These items were created to assess work context factors that were not covered in O*NET but likely relevant to our social cognitive variables.
** *p* < .01.

individual orientation but may be partially a function of job requirements.

Negative binomial regression analyses. Our outcome variable, which we will refer to as "unused vacation days," was the number of vacation days that were available but were not used for vacation. As our outcome was a count variable (i.e., an integer value of 0 or more), it was inappropriate to use ordinary least squares regression (Blevins, Tsang, & Spain, 2015). Although Poisson regression is often used to analyze count data, it has been critiqued for generating inaccurate estimates of significance when the outcome variable is overdispersed (i.e., when the outcome has too much variability to be represented by a Poisson distribution; Blevins et al., 2015; Coxe, West, & Aiken, 2009). As a rule of thumb, overdispersion is likely to be present when the mean of the count variable is less than the variance, as was the case with our outcome. Formally testing for overdispersion requires accounting

for the effect of the predictors, so we conducted an initial Poisson regression with all predictors entered and considered model fit. The model deviance was significant (deviance = 3085.73, *df* = 577, *p* < .001), indicating that our data did not fit the Poisson distribution well. Thus, instead of using a Poisson regression, we used a negative binomial regression—an approach that is appropriate when overdispersion is present (Blevins et al., 2015; Coxe et al., 2009).

In our analyses, consistent with best practices to omit control variables that have little or no relationship with the outcome variable (Becker et al., 2016), we only included those control variables that significantly predicted unused vacation days (i.e., days given and policy for unused days). Results are presented in Table 6. We report exponentiated betas to ease interpretability. When interpreting exponentiated betas, the value above (or below) 1 represents the percentage increase (or decrease) in

Table 6
Negative Binomial Regression Predicting Unused Days

Variable	Exponentiated β [95% CI]
Intercept	4.82** [1.93, 12.04]
Paid vacation days given	1.07** [1.05, 1.08]
Policy of losing vacation days (1 = lose days)	0.82* [0.68, 0.99]
Social cognitive variables	
Detachment self-efficacy	0.94* [0.89, 1.00]
Feeling relaxed	0.88* [0.78, 0.99]
Having fun	1.03 [0.90, 1.18]
Gaining perspective	0.96 [0.87, 1.05]
Connecting with loved ones	0.93 [0.85, 1.02]
Making progress on priorities	1.04 [0.98, 1.11]
Experiencing stress while planning	1.06 [0.98, 1.14]
Experiencing stress during vacation	0.91 [0.83, 1.01]
Being perceived negatively by	
supervisors/colleagues	1.01 [0.94, 1.09]
Burdening coworkers	0.99 [0.93, 1.06]
Falling behind at work	1.04 [0.96, 1.11]
Falling behind on housework	0.98 [0.92, 1.05]
Experiencing negative financial consequences	1.10** [1.02, 1.17]
Pearson χ^2 (*df*)	571.19** (644)

Note. $N = 660$. CI = confidence interval.
* $p < .05$. ** $p < .01$.

unused vacation days associated with a one-unit increase in the predictor.

Results revealed that employees who were given more vacation days had more unused vacation days. Employees with a "use it or lose it" policy for their paid vacation days had fewer unused days. Of the social cognitive variables, detachment self-efficacy significantly predicted having fewer unused vacation days. Specifically, every one-unit increase in detachment self-efficacy was associated with a 6% decrease in unused vacation days. Expectations of feeling relaxed on vacation predicted having fewer unused paid vacation days. Specifically, a one-unit increase in expectations of feeling relaxed was associated with 12% fewer unused vacation days. Expecting negative financial consequences of vacation predicted having more unused vacation days. Specifically, a one-unit increase in expectations of negative financial consequences was associated with a 10% increase in unused vacation days.

Supplementary analyses. An anonymous reviewer recommended conducting supplementary analyses to determine whether results differ for employees who are given a relatively high versus low number of vacation days. Specifically, the reviewer recommended using the median value to split the sample into employees with a lower number of vacation days given and employees with a higher number of vacation days given and running analyses separately for each subsample. Before conducting these analyses, we assessed whether it was appropriate to use negative binomial regression for each subsample and concluded that it was appropriate to do so, as the negative binomial model showed better fit than the Poisson model for both groups.

Results are shown in Table 7. The results did differ across these two groups, with the social cognitive variables no longer predicting unused days in the group of employees that received a larger number of vacation days. These results suggest that social cognitive constructs are stronger predictors of unused vacation days for employees who receive fewer vacation days, thus revealing a

likely important boundary condition of our findings. However, because these results are supplementary and based on smaller samples sizes than our original planned analyses, they should be interpreted cautiously.

General Discussion

The current research sought to explain employees' unused vacation days—an important topic given the beneficial effects of vacation on health and well-being (de Bloom et al., 2009). Overall, we found evidence that domain-specific social cognitive factors (i.e., detachment self-efficacy, expectations of feeling relaxed, and expectations of negative financial consequences) predict employees' unused vacation days.

Theoretical and Empirical Contributions

Contributions to the recovery literature. This research contributes to the recovery literature by advancing our understanding of individual factors that serve as barriers to engaging in recovery-related activities—specifically, taking vacations. In doing so, we respond to recent calls to better understand the individual factors that influence engagement in recovery-related activities (Sonnentag et al., 2017). By demonstrating that social cognitive constructs are useful for understanding individual antecedents of recovery-related behaviors and identifying the most relevant social cognitive constructs for predicting unused vacation days, our research makes important theoretical contributions to the recovery literature. Specifically, we provide a social cognitive account that not only incorporates the role of domain-specific self-efficacy—particularly detachment self-efficacy—but also incorporates outcome expectations as predictors of recovery-related behavior, showing that the two main cognitive factors emphasized in social cognitive theory (i.e., self-efficacy and outcome expectations) are relevant for understanding engagement in beneficial, recovery-related activities. The present work extends previous work (Park & Lee, 2015; Sonnentag & Kruel, 2006), which identifies domain-specific self-efficacy as an important antecedent of engaging in recovery experiences, by also emphasizing the role detachment self-efficacy and outcome expectations play in predicting recovery-related behavior.

Highlighting the importance of detachment self-efficacy in explaining employees' unused vacation days aligns with recommendations in the social cognitive literature to identify controllable factors that can be targeted to facilitate health-promoting behaviors. Although numerous studies have shown the importance of detachment for health and well-being (Bennett et al., 2016), our study is the first to our knowledge to document that employees' beliefs about their ability to detach impact engagement in recovery-related behaviors. As detachment is likely a malleable ability (Hahn et al., 2011), it may be an ideal individual difference to target to increase the likelihood of engaging in recovery-related behaviors (e.g., going on vacation) and subsequently enhance well-being, particularly for employees who are given relatively fewer vacation days.

With respect to particular types of outcome expectations, the positive outcome expectation that most strongly predicted not going on vacation was low expectations of feeling relaxed on vacation. This is unsurprising, given that relaxing is often seen as

Table 7
Median Split Negative Binomial Regression

Variable	1–15 vacation days given ($N = 322$)	16–35 vacation days given ($N = 338$)
Intercept	3.82* [1.00, 14.62]	4.18* [1.02, 17.1]
Paid vacation days given	1.12** [1.08, 1.16]	1.03* [1.00, 1.06]
Policy of losing vacation days (1 = lose days)	0.86 [0.65, 1.13]	0.78 [0.60, 1.01]
Social cognitive variables		
Detachment self-efficacy	0.92* [0.84, 1.00]	0.98 [0.90, 1.05]
Feeling relaxed	0.87 [0.72, 1.06]	0.91 [0.77, 1.06]
Having fun	1.02 [0.82, 1.29]	1.10 [0.92, 1.31]
Gaining perspective	1.03 [0.89, 1.18]	0.90 [0.79, 1.03]
Connecting with loved ones	0.87* [0.76, 1.00]	0.99 [0.87, 1.12]
Making progress on priorities	1.04 [0.94, 1.15]	1.05 [0.96, 1.15]
Experiencing stress while planning	1.02 [0.91, 1.15]	1.09 [1.00, 1.20]
Experiencing stress during vacation	0.89 [0.77, 1.02]	1.04 [0.90, 1.20]
Being perceived negatively by supervisors/colleagues	0.92 [0.81, 1.05]	1.11 [1.00, 1.23]
Burdening coworkers	1.06 [0.96, 1.18]	0.94 [0.86, 1.03]
Falling behind at work	1.03 [0.91, 1.16]	1.05 [0.95, 1.17]
Falling behind on housework	0.99 [0.88, 1.11]	0.96 [0.88, 1.05]
Experiencing negative financial consequences	1.14* [1.03, 1.26]	1.07 [0.97, 1.17]
Pearson χ^2 (df)	270.24 (306)	293.94 (322)

Note. Exponentiated β are shown with 95% confidence intervals in brackets.
* $p < .05$. ** $p < .01$.

a primary goal of vacation (Pearce & Lee, 2005). Of the negative outcome expectations, expectations of negative financial consequences were the strongest predictor of not going on vacation. Although many of the outcome expectations we examined did not predict unused vacation days, this is not necessarily because these factors are irrelevant to understanding whether employees use their paid vacation days. Rather, it may be the case that some outcome expectations are relevant for predicting use of vacation days only for specific subpopulations (e.g., employees in specific industries or demographic groups).

Although our focus in this article was not to identify the most important social cognitive predictors for specific samples, but rather to demonstrate that social cognitive constructs predict unused vacation days in a general population of employees, identifying the specific social cognitive predictors of unused vacation days for specific samples is an important area for future research. Building on our initial evidence that a social cognitive framework is useful for understanding employees' unused vacation days, particularly for employees who receive relatively fewer vacation days, researchers can use our social cognitive measures to examine and target the strongest predictors of unused vacation days in specific samples. For instance, industries characterized by ideal worker norms and long work hours may find that being perceived negatively by supervisors or colleagues is a particularly important predictor of unused vacation days. Overall, our results on outcome expectations suggest that adopting the social cognitive approach more comprehensively—by not only considering employees' self-efficacy in the context of recovery (Hahn et al., 2011; Sonnentag & Kruel, 2006) but also considering employees' expected outcomes of engaging in recovery-related activities—can help advance our understanding of individual antecedents of engaging in beneficial recovery activities.

Further, we expect that our validated social cognitive measures could be adapted to study other recovery-related behaviors through a social cognitive lens. Although some of the outcome expecta-

tions we identified may be specific to vacations, others (e.g., being perceived negatively by colleagues and supervisors, feeling relaxed) likely apply to other recovery activities (e.g., work breaks, evening breaks). Thus, like our Detachment Self-Efficacy Scale, many of our outcome expectations scales will also likely be useful for researchers interested in using a social cognitive framework to examine employees' engagement in recovery activities. As researchers use our scales to examine employees' engagement in other recovery activities, best practices for adapting scales to other contexts can be followed to evaluate and ensure validity (Heggestad et al., 2019).

Contributions to the work–life literature. In addition to contributing to the recovery literature, we also contribute to the work–life literature seeking to understand the underuse of work–life policies. We contribute theoretically to research on the underuse of work–life policies by demonstrating the usefulness of a social cognitive perspective for explaining underuse of an important work–life policy—paid vacation time. Although our account considered variables aligned with common explanations of the underuse of policies (e.g., being perceived negatively by colleagues and supervisors; Bourdeau et al., 2019), these factors were not among the strongest predictors of unused vacation days. These results suggest that our current understanding of why employees underuse work–life policies may need to be expanded to include a broader range of theoretical perspectives. Future research should examine whether a social cognitive perspective helps explain underuse of other work–life policies.

For instance, research could consider whether a social cognitive perspective could help explain the underuse of parental leave and flexible work arrangements, as these are also policies intended to promote employees' well-being and work–life balance that are currently underused (Bourdeau et al., 2019). A social cognitive perspective may be particularly useful for understanding underuse of these policies because it can incorporate known predictors (e.g., concerns about supervisors' perceptions of one's work commit-

ment, concerns about negative career advancement consequences; Bourdeau et al., 2019; Perrigino et al., 2018) as outcome expectations, while also providing a helpful framework for identifying additional psychological factors that predict underuse. Using inductive methods to generate domain-specific outcome expectations—as is encouraged when using a social cognitive framework (Bandura, 2005; Lent & Brown, 2006)—may lead to additional insights about relevant barriers to policy use. Further, considering important types of domain-specific self-efficacy may help shed light on additional predictors of policy use.

Demographic and Job-Related Predictors of Unused Vacation Days

It is notable that, although past research has identified several demographic and job-related factors that predict employees' use of vacation days (Altonji & Usui, 2007; Fakih, 2018; Hilbrecht & Smale, 2016; Maume, 2006), our results did not reveal significant associations with any of these factors. One factor that may explain why our analyses did not reveal significant effects of these demographic and job-related variables is our inclusion of the organization's policy for handling unused paid vacation days. Our study was the first—to our knowledge—to control for how the employee's organization handles unused days (e.g., "use it or lose it" policies). As anticipated, this policy was a very strong predictor of employees' use of their vacation days, in that employees were much more likely to go on vacation if unused days could not be cashed in or rolled over to the next calendar year. The strength of this predictor may partially explain why the other control variables did not predict unused days, as they have in past research.

Future Research and Limitations

As we have already discussed, future research should examine social cognitive predictors of unused vacation days in specific industries and for other types of break activities. Future research could also more fully implement the social cognitive perspective to understanding recovery behavior by identifying relevant contextual factors that facilitate self-efficacy and outcome expectations and subsequently impact recovery-related behavior. Social cognitive theory has emphasized role modeling and verbal persuasion (i.e., explicit encouragement) from significant others in one's environment as particularly important contextual predictors that shape self-efficacy and outcome expectations (Bandura, 2001). Applied to employees' recovery-related experiences, the behaviors modeled and encouraged by supervisors are likely important contextual factors predicting employees' detachment self-efficacy. These factors likely also impact relevant outcome expectations. Specifically, supervisors who directly encourage employees to go on vacation (and engage in other recovery-related activities) and refrain from conveying disapproval or frustration when employees do so can help reduce employees' expectations that taking vacation will cause others to think negatively of them at work. As such, research examining how these supervisor behaviors impact detachment self-efficacy—and how supervisors can be trained to promote detachment self-efficacy—is an important future research direction. Researchers seeking to design supervisor-focused training to enhance employees' detachment self-efficacy can draw on the family supportive supervision literature, a relevant literature

that has incorporated role modeling (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011; Odle-Dusseau, Hammer, Crain, & Bodner, 2016).

One limitation of this article is that we did not focus on moderators of the effects of social cognitive factors on unused vacation days, and future research could do so. For instance, research could consider the moderating effects of role identification (Lobel, 1991). The negative effects of some social cognitive variables (e.g., expectations for being perceived negatively by supervisors and colleagues) on use of vacation days may appear primarily for people who strongly identify with their work role. In contrast, if employees strongly identify with their family roles or see vacation as highly important, they may go on vacation regardless of expected negative consequences for other roles.

Also, as mentioned previously, one limitation of using a sample of workers from a variety of industries is that we were unable to document the predictors of unused vacation days for specific industries. One reason many of our social cognitive predictors were not significantly associated with unused vacation days is that they may serve as barriers to going on vacation only in some industries or for employees with specific job characteristics. Future research should focus on more specific populations of workers to provide a more fine-grained analysis of the most important barriers to going on vacation for specific groups of employees. Focusing on specific employee samples may even reveal social cognitive variables that were not captured in our research.

Finally, although research has shown that vacations are important for health and well-being (de Bloom et al., 2009; Gump & Matthews, 2000; Strandberg et al., 2017, 2018), little is currently known about how many vacation days are needed to derive benefits for health and well-being. This raises questions about whether not using all of one's vacation days is necessarily harmful for the health and well-being of people who have a large number of vacation days. Future research should examine nonlinear effects of the number of vacation days on health and well-being. This research may find that higher vacation days are associated with higher health and well-being up to a certain point, after which more days are no longer beneficial to health and well-being. If future research finds such effects, this would suggest that not using all of one's vacation days may be problematic only for employees who receive fewer days.

Practical Implications

Although our results need to be replicated before any firm practical conclusions can be drawn, some preliminary practical implications can be noted based on present results as well as the broader empirical support for social cognitive theory. Specifically, we suggest that organizational leaders can play a role in helping to encourage employees to go on vacation, and subsequently promoting their health and well-being, by engaging in behaviors that are known to promote self-efficacy—namely, role modeling and verbal persuasion (Bandura, 2001). Although additional research is needed on the determinants of detachment and self-efficacy, broader evidence on social cognitive theory would suggest that, if supervisors detach while on vacation and encourage their employees to do the same, employees are more likely to have detachment self-efficacy and to take vacation. As supervisors cultivate a climate in which people feel that it is normal and expected to detach

while on vacation and that encourages practices that help facilitate detachment (e.g., using away messages, having people to cover for any urgent requests during vacation, instituting policies and processes for excluding people who are on vacation from group e-mails), this should help enable employees to experience enhanced detachment self-efficacy and subsequently use more of their vacation days.

Organizations can likely also influence the outcome expectations that impact use of vacation days. Specifically, the aforementioned factors that help facilitate detachment (e.g., using an away message, having someone to cover urgent issues) will likely also facilitate relaxation, as detachment is seen in the recovery literature as a prerequisite to relaxation (ten Brummelhuis & Trougakos, 2014). As organizations model and normalize detaching while on vacation, employees should have greater expectations of feeling relaxed while on vacation and thus be more motivated to actually go on vacation.

Recently, some organizations have even adopted approaches that may help address concerns about negative financial consequences for going on vacations. Specifically, some companies have started paying employees to go on vacation (coined "paid, paid vacations"; Moore, 2017; Weller, 2016). Such policies could serve as a strategy for addressing financial barriers to going on vacation. That is, if organizations pay employees to go on vacation—but structure this incentive such that the funds can be used only for vacation expenses—employees may be more likely to go on vacation, as such a policy would seemingly eliminate perceived negative financial consequences as a barrier to going on vacation. Although this solution does appear to be a potentially promising way to address financial barriers to going on vacation, research is needed to examine the effectiveness of such "paid, paid vacation" policies, as it has not yet been examined in the empirical literature.

Apart from identifying important social cognitive factors that can likely be targeted to encourage employees to use their vacation days, our findings also highlight the importance of organizational policies for handling unused vacation days and suggests that changing policies regarding unused paid vacation days may be one way to encourage employees to use more of their vacation days. A "use it or lose it" policy would seemingly motivate employees to go on vacation while not forcing them to do so (Pasricha & Nigam, 2017). However, future research is needed to determine the broader consequences of adopting such a policy before implementing it as a strategy to encourage employees to use their vacation days. Such policies may be ineffective if other aspects of the organizational climate are not supportive of taking vacations or if implemented in certain populations (e.g., workers who lack financial resources to go on vacation).

Conclusion

In the present article, we develop and test a social cognitive framework for explaining why employees choose not to use all of their paid vacation days—an important behavior for promoting and protecting health and well-being. We find empirical support for social cognitive factors that influence employees' use of vacation days. Specifically, we find that if employees do not believe that they will actually detach from work on vacation, do not expect positive outcomes for vacation (i.e., feeling relaxed), and expect negative outcomes for vacations (i.e., negative financial conse-

quences), they will be less likely to go on vacation. Future research is needed to understand how these social cognitive factors can be changed to encourage employees to increase their use of paid vacation days and derive the associated benefits for health and well-being.

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