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The weekend matters: Relationships between stress recovery and affective experiences

CHARLOTTE FRITZ[1]*, SABINE SONNENTAG[2], PAUL E. SPECTOR[3] AND JENNIFER A. McINROE[4]

[1]*Department of Psychology, Portland State University, Portland, Oregon, U.S.A.*
[2]*Department of Psychology, University of Konstanz, Konstanz, Germany*
[3]*Department of Psychology, University of South Florida, Tampa, Florida, U.S.A.*
[4]*Department of Psychology, Bowling Green State University, Bowling Green, OH, U.S.A.*

Summary Non-work experiences during the weekend provide opportunities to recover from work demands and to replenish lost resources. This longitudinal study examined how specific recovery experiences during the weekend (relaxation, mastery, control, and detachment), as well as non-work hassles, were associated with specific positive and negative affective states during the following workweek. Participants ($N = 229$) completed surveys before the weekend, during the weekend, and during the following workweek. Hierarchical regression analyses revealed that after controlling for affective states the previous week, recovery experiences during the weekend significantly explained variance in affective states at the end of the weekend and during the following workweek. Suggestions for future research include a closer examination of the role of individual differences, self-regulation, and specific work demands in employee stress recovery. Copyright © 2010 John Wiley & Sons, Ltd.

Introduction

Employees are not isolated ''emotional islands'' meaning that their affective experiences and expressions impact others'' (Barsade & Gibson, 2007). Affective states at work can be influenced by factors at work (Weiss & Cropanzano, 1996) as well as factors off-work (Binnewies, Sonnentag, & Mojza, 2009; Demerouti, Taris, & Bakker, 2007; Heller & Watson, 2005; Rothbard & Wilk, 2006; Williams & Alliger, 1994). Recent research (Sonnentag, Binnewies, & Mojza, 2008) points to the possible role of recovery experiences for employee affect. Recovery experiences include pursuits that people engage in outside of the workplace that have been linked to unwinding from work (Eden, 2001). The current study expands beyond the seemingly trivial idea that a weekend is good for the employee and beyond recent research on recovery processes by (a) examining which specific experiences during

* Correspondence to: Charlotte Fritz, Department of Psychology, Portland State University, Portland, OR 97207, U.S.A.
E-mail: fritzc@pdx.edu

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the weekend are associated with affective states and by (b) exploring which specific affective states may be affected as a result of those off-work experiences.

Recovery From Work Demands

Weekends can be described as a time off-work during which works demands are absent or at least reduced, thus allowing recovery from the strain induced by those demands (Meijman & Mulder, 1998). Recovery may become apparent in affect restoration, increased resources for action regulation and reduced strain reactions (Kaplan & Kaplan, 1989; Kaplan, 1995). Insufficient recovery, especially over extended periods of time impairs individual health (Kivimaki et al., 2006).

Because individuals have a limited amount of psychological resources to regulate their behavior at a certain point in time (Muraven & Baumeister, 2000) and because work demands call for a high amount of self-regulation resources deplete over time. Engaging in activities that no longer tax those same resources—for example during a free weekend—can then help self-regulation capacities (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Kaplan, 1995). While some of the recovery processes may occur ''automatically'', it is crucial to consider the nature of specific weekend experiences that contribute to recovery, such as mentally distancing oneself from work or relaxation. For example, experiences during off-work time such as relaxation or the experience of control may help in regulating affect by avoiding a potentially stressful situation or by seeking distraction from it (Parkinson & Totterdell, 1999).

Based on earlier research on recovery from work stress (e.g., Fritz & Sonnentag, 2005; Sonnentag & Fritz, 2007) we assume that the recovery process is associated with certain classes of activities (e.g., those that are relaxing), but the particular choice of activities is an individual one. Thus, there may be individual differences regarding preferences for certain activities but the underlying effects, both physiologically and psychologically may be uniform across individuals. For example, one person may choose to read a magazine while the other prefers listening to music. However, both individuals would describe their off-work experiences as ''relaxing''. Based on past research on recovery as well as on theoretical work on affect regulation, Sonnentag and Fritz (2007) developed a questionnaire to measure recovery experiences. The questionnaire includes four empirically distinguishable subscales: relaxation, mastery, control, and psychological detachment. Research indicates that these dimensions are related to employee affect and well-being (Sonnentag & Fritz, 2007; Sonnentag et al., 2008a). We will incorporate these dimensions as well as one additional—namely non-work hassles—into our study.

Psychological detachment during off-work time refers to an ''individual's sense of being away from the work situation'' (Etzion, Eden, & Lapidot, 1998: p. 579). It includes mentally distancing oneself from work (Sonnentag & Fritz, 2007) and not being pre-occupied with work-related duties. The feeling of being away reduces mental demands and promotes recovery (Kaplan, 1995). When detaching oneself from work during the weekend, work demands no longer use resources needed for self-regulation and in turn allow recovery of the self-regulatory resource to occur (Baumeister et al., 1998).

Mastery experiences during off-work time include activities that pose a challenge and provide the opportunity to learn something new. These activities allow broadening one's horizon and can increase individual confidence. Mastery experiences for example include learning a new hobby, climbing a mountain, or taking a language class (Fritz & Sonnentag, 2006). Although mastery experiences initially require a certain amount of effort they should increase individual resources such as expertise and a sense if competence (Bandura, 1997; Hobfoll, 1998). The mastery experience in itself as well as the

DOI: 10.1002/job

gained confidence can then lead to the improvement in affective experiences (Parkinson & Totterdell, 1999).

When individuals are asked how they like to spend their weekend they often respond they like to ''relax''. Relaxation is associated with low activation and elevated positive affect (Stone, Kennedy-Moore, & Neale, 1995). Many different off-work activities may be seen as relaxing such as meditation (Grossman, Niemann, Schmidt, & Walach, 2004), taking a walk (Hartig, Evans, Jamner, Davis, & Garling, 2003), or listening to music (Pelletier, 2004). Tinsley and Eldredge (1995) further found that individuals associate relaxing activities with those that include few social demands and little physical and intellectual activation. Research examining relaxation off-work indicates positive relationships with well-being indicators (Sonnentag & Fritz, 2007).

It may seem as if relaxation and mastery experiences during non-work time contradict each other. While it may not be possible to experience high levels of relaxation *and* high levels of mastery in the same activity, it is still possible that employees seek out both relaxation-related activities and mastery-related experiences during a weekend. Both types of experiences can help in replenishing resources although the underlying mechanisms may differ.

Experiencing control during a weekend off-work may fulfill the individual need for autonomy or control (Deci & Ryan, 1985; Deci, Ryan, Gagne, Leone, Usunow, & Kornazheva, 2001; Kelley, 1971) by giving the individual the freedom to decide which activity to pursue. In addition, the individual can choose when and how to get involved in the chosen activity (Sonnentag & Fritz, 2007) as well as choose activities that he or she prefers to recover from work strain. Thus, the perception of control itself as well as the pursuit of preferred activities can support the recovery process. Accordingly, control was found to be associated with lower health complaints, lower emotional exhaustion, and higher life satisfaction (Sonnentag & Fritz, 2007).

Although the weekend can be beneficial for recovery it may not be free from stressors. Such stressors can include accumulated housework, conflicts with the partner or family, or sudden problems with the car (although such hassles of course are not restricted to the weekend). Research revealed that a high amount of such daily hassles impairs individual health (Bolger, DeLongis, Kessler, & Schilling, 1989). Non-work hassles during the weekend may need additional self-regulatory resources and act as an emotional drain resulting in strain reactions such as high levels of negative affective states after the weekend.

Affective States

Individual affective states are highly relevant for organizational behavior (e. g., George & Zhou, 2007; Isen & Baron, 1991). With regard to the role of affect in specific workplace experiences, attitudes and behaviors, most, but not all, research has focused on a differentiation between general positive and general negative affective states. However, research on employee affect has called for more studies of discrete affective states (Lee & Allen, 2002). Measuring discrete affective states instead of only the higher order factors may help explain variance in important organizational outcomes. Specifically, examining individual affective states can help understand relationships between affective states, work attitudes, and work behavior (Grandey, 2008). Accordingly, recent research indicates more specific relationships between discrete emotional states and outcomes in the work setting. For example, hostility more than fear or sadness seems to be related to counterproductive work behaviors (Judge, Scott, & Ilies, 2006). Therefore, we chose several discrete affective states that we assume are relevant in

DOI: 10.1002/job

the organizational context. Specifically, we chose four negative affective states (hostility, sadness, fear, fatigue) and three positive affective states (joviality, self-assurance, serenity).

The differential impact of discrete negative affective states has been clearly demonstrated (Raghunathan & Pham, 1999; Roseman, Wiest, & Swartz, 1994). For example, different negative affective states are associated with different motivational goals and action tendencies (Roseman et al., 1994). We chose hostility, sadness, fatigue, and fear as negative affective states because of their differential impact on attitudes and behaviors at work (Lee & Allen, 2002). For example, out of several negative affective states, hostility has been found to have the strongest relationship with deviant workplace behavior (Lee & Allen, 2002). Furthermore, Spector, Dwyer, and Jex (1988) found fear to be associated with lower levels of job satisfaction, and higher intention to quit. Finally, fatigue was found to be related to lower effort (Engle-Friedman et al., 2003) and poorer decision-making (Blagrove & Akehurst, 2001; Harrison & Horne, 2000; Van der Linden, Frese, & Sonnentag, 2003). We expect that when stressors are reduced (or escaped from during the weekend), the levels of these negative affective states decrease. The negative affective states we examine can also be described in the context of the circumplex model (Russell, 1980). This model differentiates between positive and negative affect on one dimension and high and low activation on the second dimension. Thus, each affective state can be described with regard to valence as well as level of activation. With regard to negative affective states we will examine fear and hostility as high activation affective states and sadness and fatigue as low activation affective states.

However, in some cases the pattern of relationships can be less distinct. For example, several negative affective states, such as sadness, fear, and fatigue, may be associated with strain reactions as well as certain employee behaviors at work. Therefore, this study gives us the opportunity to examine distinct as well as overlapping patterns of relationship between negative affective states and recovery experiences during the weekend.

The four negative affective states we examine in this study may also be especially relevant in our sample, preschool workers. For example, workers high in sadness or fear may withdraw and not show the involvement in childrens' activities that is necessary. Fatigue is associated possible errors (Harrison & Horne, 2000; Hobbs & Williamson, 2003; Mertens & Collins, 1986), which can have an impact on safety (Krauss, Chen, DeArmond, & Moorcroft, 2003). Finally, hostility in preschool workers may be associated with mistreatment of children, such as yelling or lack of compassion.

Research on positive affective states indicates that it is harder to differentiate them empirically than it is to distinguish negative affective states (Watson and Clark, 1991, Watson & Clark, 1991, 1992). As a result, research on antecedents and consequences of specific positive affective states is limited. Positive affective states are relevant in the work context because they are associated with a variety of attitudes or behaviors at work such as job satisfaction (Scott & Judge, 2006; Weiss, Nicholas, & Daus, 1999), prosocial behavior at work (George, 1991), creative problem-solving (Isen, Daubman, & Nowicki, 1987), goal-setting behavior (Ilies & Judge, 2005), and proactive work behaviors (Fritz & Sonnentag, 2009). Our study adds to research on positive affective states by examining recovery experiences during the weekend as their possible antecedents. We chose three positive affective experiences for our study, namely, joviality, serenity, and self-assurance. In the context of Russell's (1980) circumplex model, joviality is associated with high activation and refers to feeling upbeat, happy, and excited. In comparison, serenity is associated with low activation and includes feeling relaxed and at ease. Finally, self-assurance is associated with low activation as well and includes feelings of confidence, pride, and strength.

We chose these three positive affective states because we assume that they are most affected by recovery experiences during the weekend. In addition, joviality, self-assurance, and serenity may be especially important in our sample of preschool workers. Joviality is an indicator of high positive

DOI: 10.1002/job

energy and can motivate children to learn and get engaged in proposed activities. Self-assurance and serenity allow preschool workers to remain calm in the middle of noise or conflicting demands.

Thus, because preschool teachers (as well as other childcare workers) face high demands for emotional labor and therefore experience high levels of job stress and poor health (Pousette & Hanse, 2002) it is especially important to pay attention to recovery processes in this occupation.

Recovery and Affect

Weekend recovery from exposure to work stressors can help promote affect regulation resulting in higher levels of positive and lower levels of negative affective states. Parkinson and Totterdell (1999) classify affect regulation strategies into diversionary and engagement strategies. While diversionary strategies refer to avoiding a stressful situation or seeking distraction from it, engagement strategies include confronting or accepting the stressful situation. Based on this classification, recovery experiences during the weekend may act mainly as a diversionary strategy because they help in disconnecting from work and reducing strain levels.

Affective states are experienced in association with specific events (Frijda, 1993). Accordingly, Watson (1988) found that perceived stressors were associated with higher levels of negative affective states, while socializing and exercise were related to higher levels of positive affective states. Because weekend experiences such as relaxation, mastery, detachment, and control are positive experiences we hypothesize that they are associated with improved affective states, specifically, an increase in positive affect. In addition, lack of detachment and relaxation as well as high levels of non-work hassles are negative experiences that are associated with higher levels of negative affective states. Thus, non-work experiences can act as affective events that are associated with affective experiences at work. While no study so far has examined relationships between weekend experiences and discrete affective states, there is some research on associations of stress recovery during the evening (Sonnentag et al., 2008a) as well as during breaks within the workday (Trougakos, Beal, Green, & Weiss, 2008) and subsequent employee affective states. Sonnentag and colleagues examined relationships between non-work experiences in the evening of a workday and affect the following morning. They found that mastery experiences and relaxation predicted positive affective states the next morning while low levels of psychological detachment predicted negative affect.

The study by Trougakos et al. (2008) examined activities during work breaks within a workday and their relationships with affective states during the work break. Results from experience-sampling data indicates that ''respite activities'' (relaxing, napping, socializing) during the work break were associated with higher levels of positive and lower levels of negative affective states. In addition, higher levels of respite activities were related to higher levels of positive affective delivery following the work break.

Relaxation and affect

Relaxation is associated with a decrease in activation and tension and generates positive affective states. During the weekend, relaxing experiences might result from listening to music, going for a leisurely walk, or other low-effort activities. Thus, positive affective states resulting from relaxing weekend experiences will increase positive affective states after the weekend.

DOI: 10.1002/job

Hypothesis 1a: Relaxation during the weekend is positively associated with joviality.

Hypothesis 1b: Relaxation during the weekend is positively associated with serenity.

Hypothesis 1c: Relaxation during the weekend is positively associated with self-assurance.

It is not just escaping the workplace that reduces negative affective states. Rather, specific experiences such as relaxation activities help reduce existing negative affective states and avoid negative emotional experiences. Relaxation may further help reduce the tension association with negative affective states such as fear, hostility, and sadness. As a result, levels of negative affective states decrease.

Hypothesis 1d: Relaxation during the weekend is negatively associated with hostility.

Hypothesis 1e: Relaxation during the weekend is negatively associated with fear.

Hypothesis 1f: Relaxation during the weekend is negatively associated with sadness.

Hypothesis 1g: Relaxation during the weekend is negatively associated with fatigue.

Mastery and affect

Mastery experiences during the weekend refer to challenging situations that generate feelings of self-confidence and have been found to be associated with employee well-being, life satisfaction (Sonnentag & Fritz, 2007), and improvements in affect as well as in energy levels (Sonnentag, 2001; Sonnentag & Natter, 2004; Thayer, Newman, & McClain, 1994). Thus, feeling confident and competent as well as full of energy due to mastery experiences can translate into higher levels of joviality and self-assurance. In addition, mastery experiences during the weekend provide a sense of achievement that allows individuals to feel more serene regarding occurring problems such as work-related issues.

Hypothesis 2a: Mastery experiences during the weekend are positively associated with joviality.

Hypothesis 2b: Mastery experiences during the weekend are positively associated with serenity.

Hypothesis 2c: Mastery experiences during the weekend are positively associated with self-assurance.

Control and affect

Having control over time and activities off-work should increase positive affect and enhance individual well-being. A study including experience-sampling data indicates that individuals experiencing higher levels of average daily control report higher average levels of happiness (Larson, 1989). Furthermore, research on self-determination suggests that autonomy is one of the basic needs that individuals try to

DOI: 10.1002/job

fulfill and that are associated with personal growth and well-being (Deci and Ryan, 1985; Deci & Ryan, 1985, 2000; Deci et al., 2001). A sense of control or autonomy during the weekend is therefore a positive experience that translates into positive affective states after the weekend. Specifically, control during the weekend allows the individual to engage in activities that create energy and positive experiences which becomes apparent in higher levels of joviality after the weekend. The experience of control further indicates that ''things are going according to plan'' which is associated with feelings of serenity. Finally, control during the weekend allows employees to engage in activities they prefer and planned, or to finish any kind of project or solve a problem. Such experiences then translate into higher levels of individual well-being. Thus, we assume that the experience of control during the weekend is associated with higher levels of positive affective states.

Hypothesis 3a: Control during the weekend will be positively associated with joviality.

Hypothesis 3b: Control during the weekend will be positively associated with serenity.

Hypothesis 3c: Control during the weekend is positively associated with self-assurance.

Psychological detachment and affect

Psychological detachment from work allows the individual to create distance from recent work demands and gives the opportunity to regain self-regulatory resources. Research indicates that psychological detachment is associated with higher employee well-being (Sonnentag & Fritz, 2007). Sonnentag, Mojza, Binnewies, and Scholl (2008) found that detachment during the workweek was associated with higher positive as well as lower negative affect at the end of the workweek. However, Sonnentag et al. (2008b) indicated that low levels of detachment during the evening of a workday were associated with higher levels of negative affect and fatigue the following morning but not with positive affect. Thus, findings regarding the relationships between detachment and positive as opposed to negative affect seem to be inconsistent. Possibly, this may be due to the different time frames examined. In the context of the weekend we assume that detachment will be associated with positive as well as negative affective experiences. High levels of detachment—meaning not thinking about or being involved in work-related activities—allows individuals to engage in preferred activities that allow unwinding and that create positive experiences and energy. Such experiences then become apparent in increased positive affective states. In addition, distancing oneself from work-related issues during the weekend removes employees from negative affective states that were created by negative work experiences. Furthermore, detaching from work during the weekend gives the opportunity to replenish self-regulatory resources which help employees to regulate their affect (Grandey, 2008), especially reducing negative affect. Therefore, we assume that psychological detachment from work during the weekend will be associated with positive as well as negative affective states at the end of the weekend and during the following workweek.

Hypothesis 4a: Psychological detachment during the weekend will be positively associated with joviality.

Hypothesis 4b: Psychological detachment during the weekend will be positively associated with serenity.

DOI: 10.1002/job

Hypothesis 4c: Psychological detachment during the weekend will be positively associated with self-assurance.

Hypothesis 4d: Psychological detachment during the weekend will be negatively associated with sadness.

Hypothesis 4e: Psychological detachment during the weekend will be negatively associated with hostility.

Hypothesis 4f: Psychological detachment during the weekend will be negatively associated with fear.

Hypothesis 4g: Psychological detachment during the weekend will be negatively associated with fatigue.

Non-work hassles and affect

Non-work hassles (e.g., conflicts with family members, household chores, etc.) during the weekend may need additional self-regulatory resources and may hinder recovery from work stressors. Research indicates that high levels of non-work hassles during the weekend can be associated with indicators of poor employee well-being (Fritz & Sonnentag, 2005). Specifically, facing demands in the form of non-work hassles creates frustration which can become apparent in sadness as well as hostility. In addition, a high amount of non-work hassles, for example, can be associated with fear regarding loss of control over certain life domains or fear regarding the future. Finally, because non-work hassles consume additional self-regulatory resources and hinder resource replenishment the lack of resources becomes apparent in higher levels of fatigue. Accordingly, we assume that non-work hassles are associated with higher levels of negative affective states after the weekend.

Hypothesis 5a: Non-work hassles during the weekend will be positively associated with sadness.

Hypothesis 5b: Non-work hassles during the weekend will be positively associated with hostility.

Hypothesis 5c: Non-work hassles during the weekend will be positively associated with fear.

Hypothesis 5d: Non-work hassles during the weekend are positively associated with fatigue.

Method

To examine relationships between off-work experiences during the weekend and affective states we used a longitudinal design, including three measurement occasions. Based on our sample of preschool

DOI: 10.1002/job

Assumed relationships between key variables.

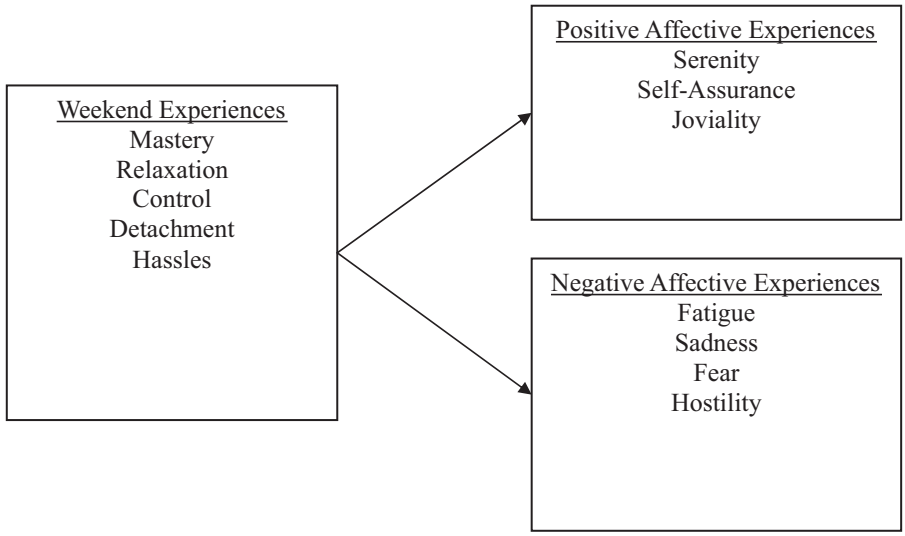

Figure 1. Assumed relationships between key variables

teachers' work schedules, *weekend* meant that employees did not work Saturday and Sunday. Weekend experiences (relaxation, mastery, control, detachment, and non-work hassles) were assessed on a Sunday evening. Outcome variables (joviality, serenity, self-assurance, fear, hostility, sadness, and fatigue) were measured on Sunday evening as well as on Friday of the following workweek (asking for affective experiences during that workweek). We assume that relationships between weekend experiences and affect on Sunday evening will be an indicator of immediate relationships while associations between weekend experiences and affect during the following workweek will reflect delayed relationships. To examine the effect of weekend experiences on changes in our outcome variables, affective states were also assessed *before* the weekend (i.e., on Friday of the preceding workweek) and were controlled for in the regression analyses. A description of the study design can be found in Figures 1 and 2.

Sample and Procedure

The sample consisted of 229 preschool teachers in Germany. We chose preschool teachers as our sample because their job requires high amounts of affect regulation (e.g., reactions to positive or negative student behavior). Therefore, recovery experiences that help regulating affect may be of particular importance. To recruit participants, a member of the project team called the head of each organization and asked them to participate in the study. After giving their consent for participation, supervisors estimated the number of respondents in their own organization. Based on that information we sent all survey packages directly to the organization and they were distributed by the head of the organization. Survey packages included instructions, three separate surveys, and a stamped return envelope. For each survey, participants were explicitly instructed when to fill it in (Friday after work,

DOI: 10.1002/job

Measurement Occasion	Variable
Time 1 Friday	Affective Experiences
Time 2 Sunday	Weekend Experiences Affective Experiences
Time 3 Friday	Affective Experiences

Figure 2. Study Design

Sunday night, and the following Friday after work). Surveys were matched using a code generated by participants. Altogether, 460 surveys were sent out. Of the 236 surveys returned, seven participants were not included in the analyses for not returning surveys at all time periods, resulting in a response rate of 50%. Out of the final sample of 229 study participants, 223 (97.4%) respondents were female. On average, participants were 38.19 ($SD = 9.56$) years old and had 15.12 ($SD = 9.27$) years of job experience. Average working time per week was 30.82 ($SD = 5.88$) hours, with an average of 1.76 ($SD = 1.65$) hours of overtime per week. Two hundred and three out of the 229 participants worked five days a week. Because German preschool hours are usually from 8 am to 1 pm, the reported average working time is common in this occupation. Thus, while a lot of the participants worked less than 40 hours, most of them still worked five days per week.

The first survey measured affective states (joviality, self-assurance, serenity, fear, hostility, sadness, fatigue) as well as demographics and was completed at the end of the workweek on Friday evening (Time 1); the second survey measured weekend experiences (relaxation, mastery, control, detachment) and non-work hassles as well as affective states and was completed on Sunday evening, thus at the end of the weekend (Time 2); the third survey measured specific affective states during the workweek and was completed at the end of the following workweek on Friday evening (Time 3). Completed surveys were mailed back directly to the researchers to ensure participants' confidentiality.

Measures

Recovery experiences

Recovery experiences were measured at the end of the weekend using the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007). Each scale included four items and answers were rated on a five-point Likert scale ranging from 1 = ''not at all'' to 5 = ''very much''. *Relaxation* referred to experiences associated with low activation during weekend activities (e.g., ''During the weekend, I used the time to relax''). Cronbach's α was 0.80. *Mastery experiences* included off-job activities that provide challenging experiences and learning opportunities in other domains (e.g., ''During the weekend, I sought out intellectual challenges''). Cronbach's α was 0.78. *Control* assessed an individual's opportunity to choose an action from two or more alternatives (e.g., ''During the weekend, I decided my own schedule''). Cronbach's α was 0.93. *Finally, psychological detachment* measured the individual's sense of being mentally away from the work situation (e.g., ''During the weekend, I distanced myself from work''). Cronbach's α was 0.70.

Confirmatory factor analyses for weekend experiences

To ensure that the weekend experiences referred to empirically distinguishable constructs, we conducted confirmatory factor analyses for mastery, psychological detachment, relaxation, and control.

DOI: 10.1002/job

Specifically, we examined whether a four-factor model fit the data better than a one-factor model. After examining the model fit using LISREL we computed a χ^2 difference test to compare model fits. We found that the four-factor model was a significantly better fitting model, with $\Delta\chi^2(6, N = 229) = 542.34$, $p < 0.001$ than the one-factor model. The fit for the four-factor model itself met generally accepted criteria for good model fit (RMSEA = 0.09, CFI = 0.95, NFI = 0.93, GFI = 0.91).

Non-work hassles

To capture a broad range of non-work hassles, we included a list of possible demands (children, housework, pets, weather, etc.). For each item we asked participants to indicated to what extent it was perceived as a hassle during the weekend (1 = not at hassle at all to 5 = a big hassle). Since the scale encompasses a checklist of possible hassles (53 items; DeLongis, Folkman, & Lazarus, 1988), we calculated the sum per person rather than the mean. Therefore, Cronbach's alpha was not calculated.

Affective states

The three positive and four negative affective states were measured via the extended Positive and Negative Affect Schedule-X (Watson & Clark, 1994). All affective states were measured at all three measurement occasions. Participants were asked to rate on a five-point scale (1 = ''not at all'' to 5 = ''very much'') how much they experienced the affective states listed in each item during the current workweek (Time 1 and Time 3) and during the weekend (Time 2). *Joviality* was measured with eight items (e.g., ''happy,'' ''joyful,'' ''excited''). This subscale captured how much the participant felt positive emotions and general optimism. Cronbach's αs for Time 1, 2, and 3 were 0.91, 0.94, and 0.92, respectively. *Serenity* was measured with three items (e.g., ''calm,'' ''relaxed,'' ''at ease''). This subscale indicated how much the participant felt mentally calm. Cronbach's αs for Time 1, 2, and 3 were 0.70, 0.80, and 0.78, respectively. Finally, *self-assurance* was gauged with 6 items (e.g., ''confident'', ''strong'') with Cronbach's α being 0.84, 0.88, and 0.89, for Time 1, 2, and 3, respectively. *Fear* was measured with six items (e.g., ''afraid,'' ''nervous,'' ''jittery''). This subscale assessed how much the participant felt fearful and generally agitated. Cronbach's αs for Time 1, 2, and 3 were 0.81, 0.87, and 0.86, respectively. *Hostility* was measured with six items (e.g., ''angry,'' ''hostile,'' ''irritable'') referring to anger and strong discontent. Cronbach's αs for Time 1, 2, and 3 were 0.86, 0.74, and 0.85, respectively. *Sadness* was measured with five items (e.g., ''alone,'' ''sad,'' ''lonely'') indicating in how far individuals felt depressed and down. Cronbach's αs for Time 1, 2, and 3 were 0.89, 0.88, and 0.91, respectively. Finally, *fatigue* was gauged with four items (e.g., ''tired'', ''drowsy'') with Cronbach's α being 0.83, 0.87, and 0.85 for the three measurement occasions.

Confirmatory factor analyses for affective experiences

To ensure that the affective states represented empirically distinguishable constructs, we conducted confirmatory factor analyses for all seven affective experiences at Time 1, 2, and 3. For each measurement occasion, we examined whether a seven-factor model was superior to a two-factor model. The two-factor model grouped all the items into two factors: positive and negative affective states. The seven-factor model grouped all items into their respective categories (e.g., joviality items were included in the joviality factor). χ^2 difference tests for each measurement occasion indicated that the seven-factor model was a significantly better fitting model than the two-factor model, and the fit statistics for the seven-factor model fell within the generally accepted range for good fit at Time 1 ($\Delta\chi^2$ (20, $N = 229$) = 376.46, $p < 0.001$; RMSEA = 0.01; CFI = 1.0; NFI = 0.95; GFI = 0.93), Time 2 ($\Delta\chi^2$ (20, $N = 229$) = 284.93, $p < 0.001$; RMSEA = 0.01; CFI = 1.0; NFI = 0.97; GFI = 0.93), and Time 3 ($\Delta\chi^2$ (20, $N = 229$) = 449.84, $p < 0.001$; RMSEA = 0.01; CFI = 1.0; NFI = 0.95; GFI = 0.92). Overall, the models show a good model fit.

DOI: 10.1002/job

Control variables

We controlled for demographic variables (gender, age, having children, work hours per week, workdays per week) with a single item each. In addition, we controlled for the level of each outcome at Time 1.

Results

Table 1 shows means, standard deviations, correlations, and reliabilities of all study variables. Correlations overall indicate stronger relationships between weekend experiences and affective states at Time 2 than between weekend experiences and affective states at Time 3. This pattern of findings indicates that weekend experiences seem to be more strongly associated with affect at the end of the weekend than with affect at the end of the following workweek.

We conducted hierarchical regression analyses to examine the relationships between weekend experiences and affective states at the end of the weekend (Time 2) as well as at the end of the following workweek (Time 3). Demographics and affective states at Time 1 were controlled for in the regression analyses. Specifically, when joviality at Time 2 or Time 3 was the outcome, we controlled for joviality at Time 1, when hostility was the outcome, we controlled for hostility at Time 1, etc. Thus, overall, we had three steps in our regression analyses: In Step 1 we included demographics, in Step 2 we included affect at Time 1 (e.g., joviality), and finally in Step 3 we included the weekend experiences, namely, relaxation, mastery, control, psychological detachment, and non-work hassles. Regression results regarding positive affective experiences can be found in Tables 2–4 and results regarding negative affective experiences are shown in Tables 5–8.

Relaxation and affect

Hypothesis 1 assumed relationships between relaxation during the weekend and positive as well as negative affective states. Results from regression analyses indicate that relaxation was significantly related to positive affective states at the end of the weekend and at the end of the following workweek. In more detail, after controlling for demographic variables and the affective experience at Time 1, relaxation significantly predicted joviality ($\beta = 0.16$, $p < 0.05$, Time 2; $\beta = 0.15$, $p < 0.01$, Time 3, Table 2), self-assurance ($\beta = 0.21$, $p < 0.01$, Time 2; $\beta = 0.18$, $p < 0.01$, Time 3; Table 3), and serenity ($\beta = 0.39$, $p < 0.01$, Time 2; $\beta = 0.39$, $p < 0.01$, Time 3, Table 4) at the end of the weekend as well as at the end of the following workweek. Thus, Hypotheses 1a through 1c were fully supported. We found that relaxation during the weekend was also related to negative affective states at the end of the weekend and at the end of the following workweek. Specifically, relaxation was a significant negative predictor of fear ($\beta = -0.27$, $p < 0.01$, Time 2; $\beta = -0.16$, $p < 0.05$, Time 3, Table 6) and hostility ($\beta = -0.18$, $p < 0.05$, Time 2, Table 5) and sadness ($\beta = -0.20$, $p < 0.01$, Time 3, Table 7). However, relaxation was not related to fatigue. Thus, Hypothesis 1g was not supported while Hypotheses 1d and 1f were partially and Hypothesis 1e was fully supported.

Mastery and affect

In Hypothesis 2 we proposed that mastery experiences during the weekend would be associated with higher levels of positive affective states. As can be seen in Tables 2 to 4, mastery experiences during the

DOI: 10.1002/job

Table 1. Means, standard deviations, and zero-order correlations among study variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Age	38.19	9.56													
2 Gender	1.02	0.15	0.01												
3 Having children	1.60	0.49	0.64**	0.00											
4 Contract hours/week	30.81	5.88	−0.09	0.17**	−0.24**										
5 Days worked/week	4.93	0.55	0.02	0.08	0.01	0.13									
6 Joviality T1	3.20	0.75	0.04	0.02	0.04	−0.01	0.01								
7 Joviality T2	3.10	0.90	−0.07	0.03	−0.06	0.01	0.07	0.53**							
8 Joviality T3	3.15	0.79	0.05	−0.00	0.08	0.01	0.08	0.66**	0.44**						
9 Self-Assurance T1	2.85	0.77	0.17*	0.05	0.13*	0.06	0.09	0.68**	0.45**	0.57**					
10 Self-Assurance T2	2.60	0.86	0.08	0.11	0.07	0.06	0.12	0.44**	0.78**	0.43**	0.60**				
11 Self-Assurance T3	2.78	0.83	0.11	0.07	0.14*	0.08	0.16*	0.49**	0.41**	0.79**	0.66**	0.58**			
12 Serenity T1	3.06	1.04	0.24**	0.01	0.18**	−0.01	−0.01	0.39**	0.17**	0.26**	0.36**	0.19**	0.24**		
13 Serenity T2	3.09	0.83	0.17*	0.07	0.05	0.04	0.03	0.39**	0.59**	0.39**	0.41**	0.57**	0.44**	0.38**	
14 Serenity T3	3.01	0.81	0.20**	0.11	0.11	0.04	−0.02	0.43**	0.28**	0.61**	0.40**	0.36**	0.56**	0.37**	0.50**
15 Fear T1	1.43	0.60	−0.01	0.08	−0.04	0.04	0.03	−0.24**	−0.15*	−0.17*	−0.15*	−0.11	−0.14*	−0.22**	−0.23**
16 Fear T2	1.32	0.55	−0.02	0.00	0.03	−0.01	0.04	−0.22**	−0.30**	−0.22**	−0.15*	−0.19**	−0.12	−0.14*	−0.38**
17 Fear T3	1.40	0.58	0.01	0.04	0.02	−0.01	0.05	−0.26**	−0.17*	−0.35**	−0.14*	−0.08	−0.22**	−0.16*	−0.23**
18 Hostility T1	1.39	0.55	−0.08	0.12	0.00	0.05	0.04	−0.26**	−0.11	−0.19**	−0.09	0.00	−0.00	−0.19**	−0.20**
19 Hostility T2	1.24	0.36	−0.07	0.18**	0.05	0.01	0.09	−0.20**	−0.29**	−0.18**	−0.09	−0.15*	−0.03	−0.14*	−0.35**
20 Hostility T3	1.38	0.53	−0.15*	0.15*	−0.16*	0.10	0.03	−0.23**	−0.04	−0.31**	−0.09	−0.00	−0.11	−0.16*	−0.15*
21 Sadness T1	1.45	0.70	−0.02	0.18**	−0.02	0.04	0.02	−0.35**	−0.20**	−0.28**	−0.22**	−0.07	−0.17*	−0.22**	−0.22**
22 Sadness T2	1.40	0.64	−0.03	0.01	0.03	−0.00	0.08	−0.30**	−0.42**	−0.26**	−0.16*	−0.27**	−0.13	−0.16*	−0.40**
23 Sadness T3	1.41	0.68	0.02	0.27**	0.05	−0.08	0.07	−0.29**	−0.16*	−0.39**	−0.18**	−0.05	−0.22**	−0.18**	−0.24**
24 Fatigue T1	1.54	0.58	−0.19**	0.24**	−0.12	0.25**	0.00	−0.29**	−0.10	−0.17*	−0.18**	−0.06	−0.08	−0.25**	−0.17*
25 Fatigue T2	1.64	0.66	−0.18**	0.03	−0.02	0.04	0.00	−0.18**	−0.25**	−0.13	−0.17**	−0.22**	−0.11	−0.16*	−0.35**
26 Fatigue T3	1.52	0.63	−0.14*	0.06	−0.08	0.04	0.02	−0.07	−0.13	−0.20**	−0.09	−0.06	−0.13	−0.09	−0.10
27 Detachment	3.22	0.97	−0.03	0.05	−0.06	0.02	0.02	0.21**	0.29**	0.16*	0.19**	0.22**	0.19**	0.16*	0.27**
28 Relaxation	3.29	10.18	0.08	0.05	0.02	0.06	−0.21**	0.28**	0.32**	0.27**	0.30**	0.33**	0.30**	0.23**	0.48**
29 Mastery	2.91	0.98	0.03	0.04	−0.02	0.11	0.16*	0.28**	0.39**	0.26**	0.30**	0.40**	0.29**	0.04	0.23**
30 Control	3.81	0.97	−0.08	−0.02	−0.18**	0.11	0.00	0.30**	0.35**	0.23**	0.24**	0.27**	0.21**	0.11	0.38**
31 Hassles	67.29	19.21	0.05	0.02	0.19**	0.01	−0.07	−0.18**	−0.22**	−0.12	0.00	−0.09	−0.05	−0.02	−0.21**

(*Continues*)

DOI: 10.1002/job

Table 1. (Continued)

	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Age																		
2 Gender																		
3 Having children																		
4 Contract hours/week.																		
5 Days worked/week.																		
6 Joviality T1																		
7 Joviality T2																		
8 Joviality T3																		
9 Self-Assurance T1																		
10 Self-Assurance T2																		
11 Self-Assurance T3																		
12 Serenity T1																		
13 Serenity T2																		
14 Serenity T3																		
15 Fear T1	−0.25**																	
16 Fear T2	−0.24**	0.44**																
17 Fear T3	−0.32**	0.47**	0.51**															
18 Hostility T1	−0.13*	0.45**	0.26**	0.32**														
19 Hostility T2	−0.20**	0.35**	0.67**	0.31**	0.47**													
20 Hostility T3	−0.19**	0.38**	0.27**	0.47**	0.59**	0.35**												
21 Sadness T1	−0.26**	0.58**	0.45**	0.43**	0.47**	0.48**	0.38**											
22 Sadness T2	−0.25**	0.36**	0.68**	0.32**	0.27**	0.69**	0.30**	0.54**										
23 Sadness T3	−0.30**	0.48**	0.50**	0.71**	0.40**	0.46**	0.46**	0.66**	0.52**									
24 Fatigue T1	−0.16*	0.27**	0.20**	0.20**	0.33**	0.26**	0.40**	0.32**	0.25**	0.30**								
25 Fatigue T2	−0.20**	0.20**	0.35**	0.18**	0.30**	0.40**	0.28**	0.27**	0.46**	0.24**	0.44**							
26 Fatigue T3	−0.22**	0.17*	0.25**	0.36**	0.08	0.13	0.20**	0.18**	0.21**	0.33**	0.32**	0.34**						
27 Detachment	0.24**	−0.20**	−0.10	−0.17*	−0.03	−0.12	0.00	−0.16*	−0.17*	−0.09	−0.05	−0.08	0.01					
28 Relaxation	0.38**	−0.23**	−0.32**	−0.21**	−0.17**	−0.27**	−0.14*	−0.19**	−0.25**	−0.26**	−0.07	−0.16*	−0.10	0.16*				
29 Mastery	0.12	0.01	−0.04	−0.05	−0.10	−0.11	−0.12	−0.09	−0.13	0.03	−0.11	−0.21**	−0.06	0.07	0.11			
30 Control	0.20**	−0.08	−0.16*	−0.07	−0.21**	−0.24**	−0.07	−0.16*	−0.23**	−0.16*	−0.08	−0.12	0.00	0.21**	0.47**	0.22**		
31 Hassles	−0.10	0.30**	0.32**	0.23**	0.40**	0.41**	0.26**	0.33**	0.38**	0.32**	0.28**	0.37**	0.06	−0.08	−0.21**	−0.18**	−0.32**	

T1 = before weekend; T2 = end of weekend; T3 = end of following workweek.
Gender: 1 = female, 2 = male.
Having children: 1 = no, 2 = yes.
*$p < 0.05$; **$p < 0.01$.

DOI: 10.1002/job

Table 2. Hierarchical regression of joviality on weekend experiences

	Joviality (Time 2)		Joviality (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.01		0.01
Age	−0.09		−0.01	
Gender	0.03		−0.01	
Having children	0.00		0.08	
Contract working hours per week	−0.00		0.25	
Days worked per week	0.04		0.06	
Step 2—Joviality (Time 1)	0.55**	0.30**	0.67**	0.45**
Step 3—Weekend experiences (Time 2):		0.15**		0.02
Detachment	0.16*		0.04	
Mastery	0.27**		0.07	
Relaxation	0.16*		0.15*	
Control	0.06		−0.05	
Hassles	−0.04		0.01	
Total R^2		0.47**		0.48**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

weekend were significantly related to positive affective states at the end of the weekend, partially supporting Hypothesis 2a through 2c. Specifically, mastery significantly predicted joviality ($\beta = 0.27$, $p < 0.01$, Table 2), self-assurance ($\beta = 0.24$, $p < 0.01$, Table 3), and serenity ($\beta = 0.12$, $p < 0.05$, Table 4) at the end of the weekend. Mastery was not significantly related to positive affective states at the end of the following workweek.

Table 3. Hierarchical regression of self-assurance on weekend experiences

	Self-assurance (Time 2)		Self-assurance (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.03		0.06*
Age	0.03		0.04	
Gender	0.08		0.04	
Having children	0.08		0.14	
Contract working hours per week	0.07		0.10	
Days worked per week	0.08		0.14*	
Step 2—Self-Assurance (Time 1)	0.62**	0.37**	0.65**	0.41**
Step 3—Weekend experiences (Time 2):		0.11**		0.04**
Detachment	0.09		0.08	
Mastery	0.24**		0.08	
Relaxation	0.21**		0.18**	
Control	−0.02		−0.04	
Hassles	0.01		0.00	
Total R^2		0.51**		0.51**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

DOI: 10.1002/job

Table 4. Hierarchical regression of serenity on weekend experiences

	Serenity (Time 2)		Serenity (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.04*		0.06*
Age	0.23*		0.23**	
Gender	0.06		0.11	
Having children	−0.11		−0.03	
Contract working hours per week	0.03		0.01	
Days worked per week	0.06		−0.02	
Step 2—Serenity (Time 1)	0.36**	0.13**	0.34**	0.11**
Step 3—Weekend experiences (Time 2):		0.28**		0.15**
Detachment	0.14*		0.16*	
Mastery	0.12*		−0.00	
Relaxation	0.39**		0.39**	
Control	0.10		−0.07	
Hassles	−0.04		0.00	
Total R^2		0.45**		0.32**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

Control and affect

Hypothesis 3 assumed that control experienced during the weekend would be associated with positive affective states. Results provide no support for Hypothesis 3a through 3c indicating that control was not a significant predictor of any positive affective states we measured.

Table 5. Hierarchical regression of hostility on weekend experiences

	Hostility (Time 2)		Hostility (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.06*		0.06*
Age	−0.20*		−0.10	
Gender	0.18*		0.14*	
Having children	0.17		−0.07	
Contract working hours per week	−0.01		0.06	
Days worked per week	0.08		−0.02	
Step 2—Hostility (Time 1)	0.45**	0.20**	0.59**	0.34**
Step 3—Weekend experiences (Time 2):		0.09**		0.02
Detachment	−0.08		0.02	
Mastery	−0.01		−0.06	
Relaxation	−0.18*		−0.10	
Control	0.02		0.11	
Hassles	0.20**		0.07	
Total R^2		0.35**		0.41

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

DOI: 10.1002/job

Table 6. Hierarchical regression of fear on weekend experiences

	Fear (Time 2)		Fear (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.01		0.00
Age	−0.10		−0.02	
Gender	0.00		0.04	
Having children	0.11		0.05	
Contract working hours per week	0.01		−0.00	
Days worked per week	0.09		0.03	
Step 2—Fear (Time 1)	0.43**	0.18**	0.47**	0.22**
Step 3—Weekend experiences (Time 2):		0.08**		0.03
Detachment	0.01		−0.07	
Mastery	0.04		−0.01	
Relaxation	−0.27**		−0.16*	
Control	0.07		0.11	
Hassles	0.17*		0.11	
Total R^2		0.27**		0.25**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

Psychological detachment and affect

Hypothesis 4 suggested that psychological detachment during the weekend would be associated with higher levels of positive and lower levels of negative affective states. Regression results indicate that psychological detachment was not associated with any negative affective states (hostility, sadness, fear, fatigue) we measured. Thus, Hypothesis 4d through 4g could not be supported. However, detachment

Table 7. Hierarchical regression of sadness on weekend experiences

	Sadness (Time 2)		Sadness (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.02		0.09**
Age	−0.11		−0.03	
Gender	0.01		0.29**	
Having children	0.10		0.05	
Contract working hours per week	−0.00		−0.12	
Days worked per week	0.08		0.03	
Step 2—Sadness (Time 1)	0.55**	0.30**	0.64**	0.39**
Step 3—Weekend experiences (Time 2):		0.06**		0.05**
Detachment	−0.08		0.02	
Mastery	−0.02		0.12*	
Relaxation	−0.08		−0.20**	
Control	−0.03		0.06	
Hassles	0.20**		0.12*	
Total R^2		0.37**		0.53**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

DOI: 10.1002/job

Table 8. Hierarchical Regression of Fatigue on Weekend Experiences

	Fatigue (Time 2)		Fatigue (Time 3)	
Variable	β	ΔR^2	β	ΔR^2
Step 1—Control variables:		0.06*		0.03
Age	−0.32**		−0.16	
Gender	0.02		0.05	
Having children	0.20*		0.03	
Contract working hours per week	0.05		0.08	
Days worked per week	−0.04		−0.04	
Step 2—Fatigue (Time 1)	0.45**	0.17**	0.32**	0.09**
Step 3—Weekend experiences (Time 2):		0.08**		0.01
Detachment	−0.04		0.04	
Mastery	−0.11		−0.03	
Relaxation	−0.03		−0.10	
Control	0.06		0.07	
Hassles	0.25**		−0.06	
Total R^2		0.31**		0.13**

Gender: 1 = female, 2 = male.
Standardized β coefficients refer to the full model.
*$p < 0.05$; **$p < 0.01$.

was related to joviality ($\beta = 0.16$, $p < 0.05$, Time 2, Table 2) and serenity ($\beta = 0.14$, $p < 0.05$, Time 2; $\beta = 0.16$, $p < 0.01$, Time 2, Time 3, Table 4). Thus, Hypothesis 4a was partially and Hypothesis 4b fully supported.

Non-work hassles and affect

In Hypotheses 5a through 5d we proposed that weekend hassles would be positively associated with negative affective states. Our results revealed that weekend hassles were significantly related to all negative states (hostility, fear, sadness, fatigue). Specifically, higher levels of hassles were associated with higher levels of hostility ($\beta = 0.20$, $p < 0.01$, Time 2, Table 5), fear ($\beta = 0.17$, $p < 0.05$, Time 2, Table 6), sadness ($\beta = 0.20$, $p < 0.01$, Time 2; $\beta = 0.12$, $p < 0.05$, Time 3, Table 7), and fatigue ($\beta = 0.25$, $p < 0.01$, Time 2, Table 8). Thus, Hypotheses 5a was fully supported while Hypotheses 5b through 5d were partially supported.

Discussion

This study examined the relevance of off-work experiences during the weekend for employees' affective states at the end of the weekend and during the following workweek. Our results indicate that weekend experiences significantly explained variance in several positive and negative affective states at the end of the weekend and, to a lesser extent, during the following workweek.

Generally, our results indicate that how employees spend their weekend can be relevant in determining their affective states when being back at work. Specifically, our findings indicate that

DOI: 10.1002/job

taking enough time to relax during the weekend increases positive and decreases negative affect. It seems that relaxation experiences reduce tension and presumably allow the regeneration of resources for self-regulation. Because the different facets of affect in turn are related to a variety of outcomes at work (Lee & Allen, 2002), relaxation during off-work time may feed back into the work context.

Our findings regarding mastery experiences (strong associations with positive affective states) again suggest a gain in individual resources (joviality, self-assurance, serenity). Specifically, the association between mastery and self-assurance supports the assumption that mastery experiences can enhance feelings of self-efficacy, which in turn is positively associated with job performance (Stajkovic & Luthans, 1998). Future research may specifically examine if self-efficacy mediates the relationship between mastery experiences off-work and individual job performance. Such findings would increase the relevance of off-work experiences for work-related outcomes and organizational effectiveness.

Our findings also reveal that having control over one life domain (non-work time) increases positive affective states. However, while bivariate relationships between control and several affective states were present in our data, those associations disappeared when the other weekend experiences and prior affective states were taken into account. Thus, it seems that the experience of control has less of an impact on affective states than other weekend experiences. Possibly, control acts as a resource that rather becomes visible in long-term outcomes such as health, life satisfaction, or job performance.

Psychological detachment from work during the weekend predicted positive, but not negative affective states. Interestingly, studies that examined psychological detachment during the workweek mostly found that detachment reduced negative affect, whereas the findings for positive affect were inconsistent (Sonnentag, Binnewies, et al., 2008; Sonnentag, Mojza, et al., 2008). Overall, the pattern of these various studies suggests that psychological detachment from work may unfold differently on weekdays compared to weekends. Whereas on weekdays, detaching may mainly mean to ''switch off'' from work by temporarily forgetting the negative aspects of work which implies a decrease in negative affective states, detaching during the weekend implies to engage in activities that include pleasurable and positive features which implies an increase in positive affective states. Moreover, not fully detaching from work during the weekend might imply that one reflects about work in a positive way. Positive work reflection during the weekend has been found to be positively related to well-being after the weekend (Fritz & Sonnentag, 2005). Even if work-related thoughts during the weekend are not inherently positive, they might have positive consequences during the subsequent workweek. For example, a pre-school teacher might think about a pressing problem within his or her group which leaves him or her better prepared for the difficulties arising during the week to come.

Because experiences during a weekend off-work are not necessarily positive, we additionally examined the role of non-work hassles during the weekend in affective states at the end of the weekend and during the following workweek. We found that, while positive experiences enhanced positive affective states, non-work hassles hindered recovery from work demands by increasing negative affective experiences. This may indicate that non-work hassles use additional resources for self-regulation (e.g., a conflict with one's partner or children), leading to higher levels of negative affective states.

Overall, we found stronger relationships between recovery experiences and affect at the end of the weekend than with affect at the end of the following workweek. Such findings may indicate that the effects of the weekend recovery are ''fading out'' during the workweek. In other words, while the individual resources gained during the weekend allow high levels of self-regulation, apparent in high levels of positive and low levels of negative affective experiences, these resources are consumed over the workweek. As a result, the level of self-regulatory resources decreases impairing affective states.

Because negative affective states can be an indicator of strain reactions, it is important to note which weekend experiences may be helpful in reducing such reactions to work stress. Our results indicate that

DOI: 10.1002/job

especially relaxation seems helpful in alleviating strain reactions (hostility, fear, and sadness) while non-work hassles seem to increase strain reactions in form of hostility, fear, sadness, and fatigue. However, because negative affective states were not associated with the other weekend experiences one may argue that the effects of non-work experiences on negative affective experiences generally are not very strong. Another explanation is that affective experiences are rather transient in nature meaning that possible effects of the weekend experiences fade out quickly so that our measures were not able to capture these rather short-term effects. It is also possible that relationships between weekend experiences and affect are not always direct, suggesting interactions with other variables.

Our results indicate that recovery experiences during the weekend were associated with all positive affective states we measured. These findings add to research on positive psychology (Snyder et al., 2002) and positive organizational scholarship (Luthans & Youssef, 2007; Avey, Luthans, & Mhatre, 2008) which lately has received a lot of research attention. Importantly, when applying positive-psychology ideas to the organizational context, it is not only important to examine what happens when employees are at work, but also how they experience life when being off the job.

Implications for practice

Our results indicate that relationships between recovery experiences during the weekend and positive affective states even last into the beginning of the following workweek. Because employees bring their affective states to work every day thereby impacting on their work environment, our findings indirectly point to the relevance of recovery during the weekend for organizational outcomes. For example, some organizations have their team meetings every Monday mornings. In that case, positive affective states due to positive recovery experiences become especially apparent in interactions between employees and can influence employee participation, group decision-making, problem solving, creativity, and so forth. Therefore, organizations should allow employees time to recover from work demands and encourage them to engage in activities during the weekend that help them recover from the adverse effects of job stressors.

With regard to specific experiences during the weekend, our results suggest that employees should seek out activities that are associated with the experience of mastery, detachment, and relaxation to help increase positive affective states. For example, activities such as exercising or learning a new hobby may include experience of mastery as well as the feeling of ''being away'' that is important for detaching from work. Furthermore, relaxing activities such as reading a book, going for a walk, or meeting for dinner with friends seem to be related to positive affective states.

Strengths and limitations

Our study has several strengths but of course results should be interpreted in the light of its limitations. One strength of our study lies in its longitudinal design. This approach allowed us to examine relationships between weekend experiences and affective states at two points in time while controlling for the baseline of our outcomes (affective states before the weekend). By controlling for affective states before the weekend we examined how far the reported weekend experiences explained changes in affective states. In addition, by taking the possible influence of weekend hassles into account, we showed that the weekend experiences we measured were associated with affective states over and above the impact of non-work demands during the weekend.

When examining relationships between recovery experiences and affective states we entered all four recovery experiences and non-work hassles into the regression equation. Significant relationships

DOI: 10.1002/job

therefore indicated associations between one recovery experience and the outcome even when taking the other experiences into account. Thus, we used a relatively ''conservative'' approach to test our hypotheses. With regard to possible collinearity, our data shows that correlations between recovery experiences where rather small with the exception of relation and control ($r = 0.47$). These findings suggest that study participants were quite able to differentiate between the different recovery experiences.

One limitation of our study was the use of a single-source design with all variables assessed through self-reports. This approach may have led to distortions in relationships among variables due to shared biases. In that case, separating the measures in time (which we did) or including reports from other sources are normally suggested (Ilies, Schwind, Wagner, Johnson, DeRue, & Ilgen, 2007). However, as the variables in our study refer to very subjective experiences, we do not think that reports from others may help in explaining the processes we were trying to detect. One idea, however, may be to use significant other reports of weekend experiences and then examine how well these reports overlap with responses from the focal person.

While we used a longitudinal design, weekend experiences and affective states at the end of the weekend were assessed at the same point in time. Thus, relationships between predictors and outcomes in this case may at least partially be due to measurement bias. Therefore, these findings should be carefully interpreted and replicated in future research using one additional measurement occasion. One possibility would be to measure weekend experiences on Sunday and affective states on Monday.

Another possible limitation of our study was the used of paper-based surveys. Specifically, we had to rely on participants' compliance with instructions which may raise questions regarding when precisely the questionnaires were completed. One solution to this shortcoming may be for future research to use electronic diaries that document exact response times. So far, however, research indicates that paper-based diaries are not necessarily more prone to measurement bias than electronic formats of data collection. Both methods (with few exceptions) seem to be associated with psychometrically equivalent findings (Green, Rafaeli, Bolger, Shrout, & Reis, 2006).

We chose preschool teachers as a sample based on the importance of affect regulation in their every day work. Because preschool worker is a common occupation with high importance to society we think that our findings can be applied widely. However, in some regards, our sample is specific. For example, the reported working time per week was 30 hours, which is common in this occupation but which is less than in a lot of other occupations. However, since almost all participants reported working five days per week they followed a work cycle that is common to a variety of other occupations. Further, when interpreting our results, one should also be aware that the majority of our sample was female. Thus, our results may be based on gender-specific recovery processes. However, because we focused on recovery *experiences* rather than specific *activities,* relationships with affective outcomes may still be similar as for men.

Future research

Perhaps the biggest unanswered question in this study concerns the extent to which results might differ among occupations. Future research should examine the potential moderating effect of job stressors on the relationship between recovery activities and outcomes. One may assume that higher levels of job stressors lead to higher levels of strain, including negative emotions, and that this might require more frequent or longer break times to recover. However, one could also assume the existence of individual differences in that individuals with higher job stressors may be better able to cope with such demands, or may have developed more social support both at work and home. Therefore, although this study does not indicate such processes explicitly, future research may be able to shed further light on relationships between individual differences, work demands, recovery experiences, and strains.

DOI: 10.1002/job

Furthermore, it is possible that employees with specific job features benefit from some types of weekend experiences more than others. For example, one question is whether employees who have a lot of mastery experiences during work need to have different experiences during the weekend to compensate. Answering this question could add to research on predictors of employees' choice of weekend activities (Trougakos et al., 2008). Thus, it does not only seem important to know possible outcomes of specific off-work experiences but also to learn about possible antecedents of successful recovery processes.

In many jobs it is important to continuously regulate behavior to display emotions that are appropriate in the given context (Hochschild, 1983). Such affective delivery demands, especially relating to displaying emotions that are not genuinely felt, have been associated with impaired health such as burnout (Grandey, 2003). Recovery experiences help affect regulation thereby possibly reducing emotional demands on employees during the workweek. This may be especially true in our sample of preschool teachers who need to interact with children all day, thereby regulating their affective states in order to show appropriate emotional responses to the children. Therefore, future research may examine in more detail to what extent recovery experiences can help in regulating affect and coping with affective delivery demands.

In conclusion, our findings add to research on recovery processes indicating that recovery experiences during the weekend can enhance positive affective states at the end of the weekend and—to a lesser extent—during the following workweek with joviality and serenity most strongly being affected. In contrast, weekend hassles seem to be associated with higher levels of negative affective states. The weaker relationships between weekend experiences and affective experiences during the following workweek point toward a ''fadeout'' of the positive weekend effects.

Author biographies

Charlotte Fritz is an assistant professor of Industrial and Organizational Psychology at Portland State University, Oregon. She received her PhD from the Technical University Braunschweig (Germany) in 2005. Her research interests include job stress and the role of unwinding from work in employee well-being and performance. In addition, she has conducted research in the areas of proactive and creative behaviors at work. Her research has been published in a variety of outlets such as the *Journal of Applied Psychology, Journal of Management, Journal of Vocational Behavior, or Journal of Occupational Health Psychology.*

Sabine Sonnentag is a full professor of Work and Organizational Psychology at the University of Konstanz, Germany. She studied psychology at the Free University Berlin and received her Ph.D. from the Technical University Braunschweig. In her research, Dr. Sonnentag is mainly interested in how individuals can achieve sustained high performance at work and remain healthy at the same time. She studies recovery from job stress, proactive work behavior, learning, and self-regulation in the job context. Dr. Sonnentag published in journals such as the *Journal of Applied Psychology*, *Journal of Occupational Health Psychology*, and *Personnel Psychology.* She serves on editorial boards of several scholarly journals and is currently the editor of *Applied Psychology: An International Review.* She is Fellow of the *Society for Industrial and Organizational Psychology.*

Paul E. Spector is a distinguished university professor of industrial/organizational (I/O) psychology and I/O doctoral program director at the University of South Florida, USA. He is also director of the NIOSH funded Sunshine Education and Research Center's Occupational Health Psychology program. He is the Associate Editor for Point/Counterpoint for *Journal of Organizational Behavior*, and *Work &*

DOI: 10.1002/job

Stress. He is on the editorial boards of *Journal of Applied Psychology*, *Organizational Research Methods*, and *Personnel Psychology*. His research interests include methodology, counterproductive work behavior, occupational stress, personality, and violence. In 1991 the Institute For Scientific Information listed him as one of the 50 highest impact contemporary researchers (out of over 102,000) in psychology worldwide.

Jennifer McInroe is an occupational skills analyst with the Oregon Employment Department. She received her M.A. in Industrial and Organizational Psychology from Bowling Green State University in 2008, and is currently finishing her PhD at Bowling Green State University. Her research interests include job stress, work-family conflict, and occupational health psychology.

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