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Article

Exploring the Vital Worker Over Time – A Week-Level Study on How Positive and Negative Work Events Contribute to Affect and Sustain Work Engagement

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Abstract: Although work events can be regarded as pivotal elements of organizational life, only a few studies have examined how positive and negative events relate to and combine to affect work engagement over time. Theory suggests that to better understand how current events affect work engagement (WE), we have to account for recent events that have preceded these current events. We present competing theoretical views on how recent and current work events may affect employees (e.g., getting used to a high frequency of negative events or becoming more sensitive to negative events). Although the occurrence of events implies discrete changes in the experience of work, prior research has not considered whether work events actually accumulate to sustained mid-term changes in WE. To address these gaps in the literature, we conducted a week-level longitudinal study across a period of 15 consecutive weeks among 135 employees, which yielded 849 weekly observations. While positive events were associated with higher levels of WE within the same week, negative events were not. Our results support neither satiation nor sensitization processes. However, high frequencies of negative events in the preceding week amplified the beneficial effects of positive events on WE in the current week. Growth curve analyses show that the benefits of positive events accumulate to sustain high levels of WE. WE dissipates in the absence of continuous experience of positive events. Our study adds a temporal component and informs research that has taken a feature-oriented perspective on the dynamic interplay of job demands and resources.

Keywords: affective events; work engagement; sensitization-satiation effects; job demands-resources model; experience sampling; growth curve modeling

1. Introduction

From a psychological perspective, organizational life can be understood in terms of a chain of events [1]. Interestingly however, despite calls to take issues of time more seriously [2–4] researchers in the field of occupational health psychology have only recently begun to consider dynamics in relevant phenomena like employee strain and engagement [5] through the lens of work events [6]. Work engagement has been described as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" [7]. Work engagement has attracted considerable research interest within the last fifteen years [8–10]. In particular job characteristics

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have been identified as major drivers of work engagement [5,9,10] and empirical evidence consistently shows that work engagement is determined by the interplay of different kinds of job characteristics (e.g., autonomy, workload) [11]. However, it has been suggested that to understand the experience of work and how it relates to employee outcomes like engagement, it is advisable to go beyond generalized perceptions of how a job usually is (i.e., job characteristics as measured in survey studies). More specifically, there is a need to consider dynamic aspects (i.e., fluctuation in job characteristics from day to day) [11,12] as well as factors more proximal to employee experiences over time [13]. Hence, a focus on enacted job characteristics, that is events and activities in the job as they happen [13], is warranted. Work events differ from features of the job in that they are "discrete and bounded in space and time" [1]. Therefore, the study of work events rather than job characteristics, provides the opportunity to add a temporal component to the research on job characteristics [5] and to focus on work events as more proximal antecedents of work engagement [12,13]. In other words, studying work events rather than job characteristics offers the opportunity to specify and examine how the different things that happen to employees at work overtime combine to affect work engagement. For instance, over the course of time employees are likely to experience a series of positive events (e.g., praise from the supervisor after successfully finishing an important task) and negative events (e.g., an episode of interpersonal conflict with colleagues). Although the occurrence of each of these events is associated with short-term fluctuation in work engagement in its own right [14], it is likely that last week's work events carry over to affect work engagement still during the current workweek [15]. Furthermore, different work events may interact to predict work engagement. Put another way, receiving praise from one's supervisor in this week's team meeting will foster work engagement, but preceding events like positive feedback from the supervisor or interpersonal conflict with colleagues in the previous week may change the impact of the very same event [see 1]. Hence, it is worthwhile to consider work events embedded within a chain of events over time [16]. To account for the richness of the experience of work [17], we draw on a taxonomy of work events, which encompasses a broad range of relevant positive and negative work events [6]. The taxonomy has been derived from qualitative research [6] and can be considered exhaustive with regard to the most relevant work events from the perspective of employees. The taxonomy provides an integrative framework covering a broad range of work events that have been considered in the literature so far (see [6] for a literature review). We leverage this taxonomy to examine which specific type of work event is most relevant to work engagement, besides the effects of positive and negative work events in general terms.

Above, we have outlined that an event-oriented approach permits specifying the order of what happens when and interactions among current events and recent events. Recently, Wickham and Knee [15] have proposed applying experience sampling data to analyze such interactions between current events and recent events to describe psychological processes of sensitization and satiation over time. For instance, in the case of sensitization, last week's conflict makes the currents week's conflict seem worse. That is, employees become more vulnerable or susceptible to work events with each episode. Conversely, in the case of satiation, last week's conflict makes this week's conflict seem less threatening. In other words, employees become less vulnerable or susceptible to work events with each episode. We adopt this approach to examine sensitization and satiation to the study of both positive and negative events predicting work engagement. Furthermore, a positive event like praise from the supervisor may yield particularly strong effects on work engagement after a negative event has occurred [16,see 18,19]. Hence, we extend the sensitization-satiation perspective and scrutinize the interplay of positive events and negative events from one week to the next week. Interestingly, experiencing a set of events in a given order (i.e., conflict with colleagues after praise from the supervisor) may not be equivalent to the reverse order and it is likely to result in different levels of work engagement. However, theory and empirical research on job characteristics and work engagement so far have been largely focused on situational features work [11] and have rarely considered temporal issues in depth. Put another way, research on job demands and resources usually does not distinguish between experiencing a specific resource prior to or after being confronted with high levels of a specific job demand. Accordingly, in this study, we aim to account

for the order of positive and negative events and examine competing hypotheses. Given that job characteristics (demands and resources) are linked to work events as more proximal precursors of work engagement [12,13] our event-oriented temporal approach has implications beyond the study of work events per se. In this sense, the different types of work events correspond to immediate situational consequences of a broad range of job characteristics [12,13]. Hence, our research informs researchers interested in the interplay of job demands and job resources and may contribute to reconcile inconsistent findings on this interplay as well.

On a related note, it is important to gain insights into how frequent exposure to positive and negative events may accumulate to affect work engagement over longer periods of time [5,20,21]. These insights are important as they pave the way to connect transient processes to longer-term processes underlying employee well-being [20]. In the study of work events, researchers have rarely gone beyond considering the cross-sectional associations or short-term effects of events over a couple of hours [see 6 for a review]. Hence, we know little about sustained effects due to the accumulation of negative or positive events over time. However, if work events do not have longer-term implications for individual outcomes, one may question their practical relevance [20]. Conversely, studying accumulation effects may contribute to gain insights in how mundane events in the daily grind of work add up and lead to potentially profound changes in work engagement over time. We therefore conducted a week-level diary study over a period of four months, which fits these aims best: Capturing meaningful events shortly after they happen, but at the same time monitoring mid-term changes in work engagement applying an intensified longitudinal design.

Our study contributes to the literature in at least two ways. First, we consider sensitization and satiation to positive and negative events. In a similar vein, we study how positive and negative events combine to affect work engagement from week to week. In this sense, we follow the call for applying experience sampling data for analyzing the effects of work events within the context of a history of preceding events [1,15]. Second, we add a longitudinal perspective and consider whether the frequent occurrence of work events predicts mid-term trajectories in work engagement over four months.

1.1. What Happens in the Short Run: Work Events as Antecedents of Work Engagement

In recent years, evidence on antecedents of work engagement at the intraindividual level has started to accumulate [11]. However, links between work events and work engagement have rarely been considered explicitly. According to Weiss and Cropanzano [12] affective events are "things [that] happen to people in work settings" to which "people react emotionally" (p. 11). From the perspective of conservation of resources theory [22] positive events signal the availability of resources or opportunities for resource gain [23]. Given that positive work events refer to experiences that either overlap in content with or are triggered by resources such as rewards or reinforcement [11,24,25], we assume that positive events at work are positively related to work engagement. Accordingly, positive work events, such as praise from the supervisor, predict work engagement within [18,26] and between individuals [25]. By contrast, negative events can be considered factors that detract attention and may inhibit engagement in the focal tasks [27]. So far, empirical evidence on negative events and work engagement has been mixed. One study has favored significant negative links between negative events and work engagement at the day-level [14,see also 18]. By contrast, other researchers found negligible lagged associations with work engagement [28]. Their results suggest no lagged main effects of previous day-positive event intensity on work engagement the next day. Moreover, in some studies negative events paradoxically even yielded beneficial lagged effects on job satisfaction [16] and work engagement [18]. More specifically, these studies suggest that we need to account for what happens in the aftermath of the focal events. Events probably do not affect employee well-being in isolation and it is unlikely that "participants in diary studies … become a tabula rasa once they have completed the diary report for a given interval" [15]. Therefore, in this study, we add a temporal component and consider work events embedded in a series of events that may happen to an employee over time [1,16]. For one, we take into account that recent events may carry over from one week to the next

week to affect work engagement. For the other, we consider how past events affect the impact of current work events. Given that there are concurring views of how the interplay of work events might look like, we derive and state competing hypotheses. Prototypical patterns of interactions are depicted in Figure 1. Panel A refers to prototypical patterns of work engagement which may arise from the interaction of current x lagged positive events. Panel B describes prototypical patterns for interactions of current x lagged negative events. Finally, Panel C illustrates how positive events and negative events may combine over time to affect work engagement. Given that we aim to extend the perspective beyond prior day-level research, we focus on links and interactions at the week-level – a time frame rarely applied to work events. This approach appears adequate, because the seven-day week is a salient unit for structuring time [29]. Furthermore, associations from week to week tap into less transient and more profound effects over time [30].

1.2. Temporal Patterns of Positive Events

While the concurrent association between positive events and work engagement is well-established [18,14,25,26,see also 28], the carryover effects of positive events on work engagement have rarely been considered [see 28 for the only exception]. However, their study was focused on negative event intensity and several features of their design (e.g., events sampled on three consecutive day three days only, time frame of focal measures referred to the day level), their measures (e.g., affective reaction to events vs. frequency of events as predictor), and their focal analyses (e.g., coefficients for positive events when controlling for several other aspects) prevent us from drawing strong conclusions regarding lagged effects of positive events per se. Basically, there are two perspectives: First, positive events experienced in the course of the previous workweek may linger on to affect work engagement in the current week, for instance by means of positive reflection (e.g., about successfully finishing a project) [31] or capitalization on the same event through social sharing with others [32]. Second, positive events from the previous workweek may change the way current positive events are perceived and experienced. To investigate these temporal processes, Wickham and Knee [15] have suggested applying interactions of current events (concurrent) and more recent events (lagged) to experience sampling data. As illustrated in Panel A of Figure 1, there are two prototypical patterns of the interaction. On the one hand, employees may get used to high frequencies of positive events. For instance, research on the hedonic treadmill suggests that individual standards may change and positive events will be taken for granted, when positive events have occurred frequently before [33]. That is, in the light of many positive events in the previous week, currently high frequencies of positive events have a reduced impact on work engagement. Throughout this manuscript, we label this pattern satiation effect (right side of Panel A in Figure 1). On the other hand, positive events in the past may contribute to benefit even more from current positive events, as positive events broaden awareness for positive events which might follow [34]. Throughout this manuscript, we label this pattern intensification effect (right side of Panel A in Figure 1). Positive events may even trigger behaviors of the individual that provoke positive events in the future [see 35]. Given that there are competing theoretical views and prior empirical results do not allow for firm conclusions, we state two competing hypotheses for satiation vs. intensification effects:

Hypothesis 2. *Concurrent positive events in week n and lagged positive events in week n-1 interact to predict work engagement in week n. Lagged positive events (a) amplify (intensification) or (b) alleviate the effect of concurrent positive events (satiation).*

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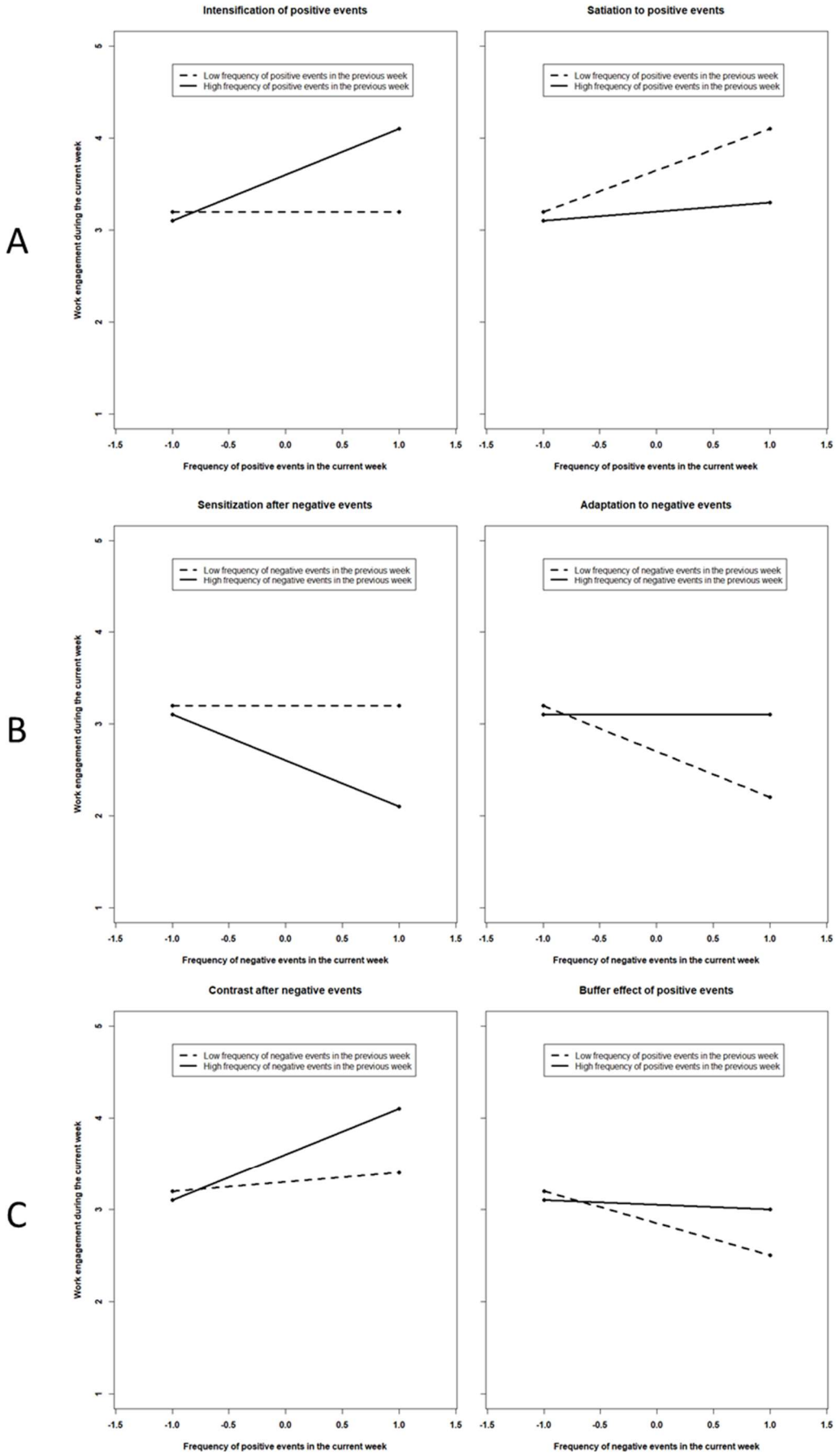

Figure 1. Prototypical ways of how work events may interact to predict work engagement

1.3. Temporal Patterns of Negative Events

The rationale regarding sensitization and satiation effects presented above can also be applied to negative events. Prototypical patterns of work engagement are illustrated in Panel B of Figure 1. Negative work events in the previous workweek may affect employees even after a couple of days have passed [36,see also 28]. So, negative events in the current workweek may shift attention to negative cues in the environment and make employees react more sensitively to negative events during the next workweek [21,see also 37]. In line with this perspective, [38] found that individuals reacted more sensitive to negative social events on a given day, when negative events had preceded the day before. A prototypical pattern of work engagement is depicted on the left side of Panel B in Figure 1. Throughout this manuscript we label this pattern sensitization effect.

By contrast, from the perspective of the allostatic load model [39], it is also plausible that employees will adapt to negative events and will not mind negative events, when they re-occur. This may be because employees might become more proficient in dealing with negative events [40] or become more resilient due to having been challenged before [41]. Throughout this manuscript, we label this pattern adaptation [42]. In sum, negative events in the previous workweek, may make employees either more susceptible to the detrimental effects of negative events (sensitization) or may contribute to adapting to negative events (adaptation, see right side of Panel B in Figure 1). Again, we state two competing hypotheses:

Hypothesis 2. *Concurrent negative events in week n and lagged negative events in week n-1 interact to predict work engagement in week n. Lagged negative events (a) amplify (sensitization) or (b) reduce the effect of concurrent negative events (adaptation).*

1.4. The Interplay of Positive and Negative Events over Time

Beyond sensitization and satiation effects, our study addresses the question of whether experiencing positive events in the aftermath of negative events results in different levels of work engagement than experiencing positive events after a period of few positive events. Above we have discussed that positive events in the previous week may broaden awareness for and strengthen the impact of current positive events. In a similar way, negative events in the past may also change the way current positive events are perceived. For instance, experience sampling research on work events and after work fatigue suggest that employees benefit most from positive events in the face of negative events and in the face of chronically high job demands [19]. Other researchers have argued that work engagement results from a shift in affect in the aftermath of negative events – that is down-regulation of negative affect and up-regulation of positive affect [18]. Empirically these authors found that negative events enhance, rather than impair work engagement, when followed by high levels of positive affect. Given that prior research is mute on the triggers of affective shift and the beneficial effects on work engagement, we consider positive work events as predictors, because positive events have consistently been linked to positive affective outcomes [6]. Positive events in the aftermath of negative events may be particularly beneficial for work engagement, because positive events create a contrast effect at the backdrop of prior negative events [43,44,see also 19]. Accordingly, and in line with the contrast after negative events perspective, we expect that negative events in the past and current positive events interact to predict work engagement. A prototypical pattern of work engagement is depicted on the left side of Panel C in Figure 1. Throughout this manuscript we label this pattern contrast effect. More specifically, we expect that positive events in the aftermath of negative events will have a particularly strong effect on work engagement:

Hypothesis 3. *Concurrent positive events in week n and lagged negative events in week n-1 interact to predict work engagement in week n. Lagged negative events amplify the effect of positive events (contrast effect after negative events).*

To gain a more complete picture of how positive and negative events interact over time, we need to consider whether positive events in the past change the impact of current negative events. We argue, that positive events in the previous workweek may also contribute to build up personal resources [23,24] which change the way current negative events affect work engagement. For instance, high frequencies of positive events in the previous workweek are associated with positive affect [6] and may therefore replenish coping resources [45]. In this sense positive events likely strengthen self-efficacy [46] and self-regulation capacity [47] as personal resources [see for instance 48]. Hence, after experiencing positive events in the previous workweek employees may be well-equipped to face negative events in the current week. In line with this idea, [14] found that habitual acceptance as a personal resource buffers the detrimental effects of negative events on work engagement at the day-level. Given that positive events likely feed personal resources and resources in turn attenuate the detrimental effects of negative events on work engagement, we assume that positive events in the previous workweek attenuate the impact of negative events in the current week. Throughout this manuscript we label this pattern buffering effect. A prototypical pattern of work engagement is depicted on the right side of Panel C in Figure 1.

Hypothesis 4. *Concurrent negative events in week n and lagged positive events in week n-1 interact to predict work engagement in week n. Lagged positive events attenuate the effect of current negative events (buffering effect).*

1.5. What Happens in the Long Run: Sustained Effects of Work Events Over Time

Recently, Ilies, Aw, et al. (2015) have reviewed theory and empirical evidence on intraindividual models of well-being and noted that we need to connect transient processes (as reflected in fluctuations in well-being from day to day) to longer-term processes (as reflected in changes in well-being over periods of weeks, months, or years). If applied research provides evidence that, for instance, positive events are associated with sustained changes in work engagement over longer periods of time these findings would underscore the practical relevance of these concepts in organizations from a practitioner's point of view. Whereas associations at the day- or week-level may reflect fluctuations around characteristic average levels that might be largely stable over time [see also 33], sustained effects address the issue of whether work events indeed yield chronically beneficial effects [20]. Given that prior intraindividual research has not considered this aspect empirically, we examine whether frequent exposure to positive and negative events is associated with mid-term changes in work engagement over time at the interindividual level.

Drawing on conservation of resources theory [22], it has been suggested that work engagement results from resource abundance [49,50]. According to Halbesleben and colleagues [24] positive aspects in organizational settings like social support, justice, or trust act as signals that the "investment of resources will help the individual realize his or her goal of achieving more resources." (p. 1347). Given that positive events tap into these kinds of signals, we assume that a high frequency of such signals over time is associated with gains in work engagement. The frequent experience of positive events over time should accumulate to feed higher levels of work engagement. In other words, trajectories of work engagement should be more positive (steeper increase) when positive events occur frequently compared to when positive events occur infrequently.

Hypothesis 5. *Trajectories in work engagement differ between persons dependent upon the frequency of positive events over time. Higher (lower) frequencies of positive events are associated with steeper (flatter) increases in work engagement.*

Given the pioneering nature of our study with regard to mid-term trajectories of work engagement dependent upon accumulation of work events, we do not state a formal hypothesis on the effects the frequency of negative events over time might have. However, we do investigate the concurrent effects of frequency of negative events within our focal analyses on the accumulation of

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positive events. Our analyses, therefore, also provide insights into the relative importance of positive vs. negative events for work engagement in the long run

2. Materials and Methods

2.1. Procedure

Drawing on the rationale outlined above we conducted a week-level diary study across a period of four months. Participants filled in a general survey containing demographics and other variables assumed to be largely stable across time. After registering for the study and filling out the general survey participants received emails inviting them to complete short diary questionnaires across a period of fifteen consecutive weeks with two questionnaires per week. The procedure and materials of this study have not undergone examination by an ethics committee, as the measures and procedures of our study followed the protocols of standard self-report experience sampling research in applied psychology, and we did not touch sensitive topics (like e. g. sexual orientation). Our study fully complied with the standards of the Department of Psychology at the University of Hagen, which included strict guidelines to guarantee anonymity of the self-reported data. Individuals interested in participating in our study were informed about the general aims and the protocol of the study before their participation. Our protocol did not include any form of deception of participants. Participation was voluntary and participants had the opportunity to quit whenever they wanted.

2.2. Sample

Our 135 participants were employees who were enrolled in a psychology distance learning program at a German university that offers these courses primarily for individuals who study besides their regular jobs and occupations. Participants received course credit for filling out the general survey and the diary questionnaires. Credit was commensurate with the number of completed weekly surveys and participants, who completed ten or more surveys received some extra credit.

Seventy-seven percent of our participants were female. Average age was 35.41 years (SD = 9.93), ranging from 18 to 61 years. Tenure within the organization ranged from less than one year to 28 years (M = 6.79, SD = 7.34). Participants came from diverse industries, mainly from healthcare (19%), the service sector (16%), education (10%), and commerce (9%). Participants had either full-time or part-time jobs and worked on average 32.18 hours per week (SD = 9.92), 75% had a permanent contract and 29% had a leadership position. In total, we received 849 observations (person-weeks) for Friday from 135 persons (on average 6.3 weeks per person, 42% of the theoretically possible 2025 observations) suited for use in our growth curve models. Our analyses of short-term lagged effects from one week to the next week, however, relied on matched observations from two consecutive weeks. Given that participants had missing data for single or several weeks over the course of 15 weeks, our analyses of the short-term effects were based on a sample of 490 matched observations from 101 employees. Descriptive information and zero-order correlations for the full sample and the matched sample at the intraindividual level and at the interindividual level are presented in Tables 1 and 2, respectively.

2.3. Measures

We applied short versions of validated scales adapted to the purposes of our study. Participants rated aspects on 5-point Likert scales to indicate the frequency of experiences during the recent workweek. Unless stated otherwise, response options ranged from 1 (“never during this week”) to 5 (“several times a day”).

2.3.1. Positive work and negative work events during the workweek.

We measured work events within the recent workweek on Friday afternoon using eleven items from the work events checklist which covers the work events clusters identified by Ohly and Schmitt [6]. The work event checklist consists of 13 items, two of which refer to events not directly related to the job (negative events: bad news in employees' private lifes and health problems). Given the focus and theoretical rationale of the present study, we confined analyses a set of eleven items, which were explicitly job-related. However, we included the off-job events in the supplemental analyses. Five items tapped into positive events during the current workweek. Sample items are "Did you get confronted with positive but unexpected news or information (e.g., a promotion or a new work order)?" and "Did you receive a positive feedback or a thank from anyone (e.g., supervisor, colleagues or customers)?". We applied six items to capture negative events within the recent workweek. Sample items are, "Did you experience any conflicts or communication problems with colleagues?" and "Did you experience a situation that negatively affected the working climate and the cooperation among the employees/colleagues in your department/your company (e.g., dismissal of a colleague, issues dealing with the supervisor, unsuccessful team meetings)?". Given that work events are formative rather than reflective constructs coefficient alphas are not adequate for judging reliability [51]. For instance, experiencing high levels of conflicts does not necessarily imply high levels of ambiguity or organizational changes at the same time.

2.3.2. Work engagement during the workweek.

We applied a brief three item measure to capture work engagement based on the UWES-9 items (Utrecht Work Engagement Scale) [52]. Preliminary analyses based on cross-sectional data from the baseline survey of the present study using the UWES-9 items (Utrecht Work Engagement Scale) [52] suggested that all items loaded on one factor [see 53 on the structure of the UWES] and in our study the three highest loading items captured engagement as reliable as the UWES-9 in our baseline survey (r UWES9-UWES3 = .97). We applied the following items: "During this week, I was enthusiastic about my job.", "During this week, I was immersed in my work.", and "During this week, I got carried away when I was working.". We calculated multilevel alpha for work engagement following procedures introduced by [54] implemented in R by [55]. Alphas for work engagement were .84 at the intraindividual level and .96 at the interindividual level.

2.4. Analytic Strategy

We applied multilevel modelling [56] to account for dependence of repeated observations. We applied the "nlme"- package for R [57]. As weekly observations were nested within persons, we specified two-level models. Work engagement yielded an intra-class correlation coefficient (ICC(1)) of .61. In our focal analyses predictors at the week-level (Level-1) were centered around the person-mean [58]. Given that we expected relationships between predictors and criteria to vary across persons, we specified random effects for all focal predictors. We controlled for the Level 2-effects of our focal predictors [59,60] [see also 15] and entered the person-means of positive and negative events for each person to predict the intercept of work engagement. The person-mean of positive or negative events captures the amount of work events experienced over the period of 15 weeks. Including the person-mean of positive and negative work events at Level 2 offers the advantage of being able to differentiate between differences at the interindividual level and the focal short-term effects at the intraindividual level [61]. Our model is equivalent to what Kreft et al. call a CWC2 model [62].

To analyze mid-term effects of the frequent exposure to work events over time, we specified growth curve models using multilevel modeling. We followed the steps recommended by [63] for growth curve modeling using a multilevel modeling approach in R. We specified linear changes (decrease or increase) in work engagement over time as a random slope of time in weeks predicting these outcomes. Significant random effects indicate that employees differ in the rate of change in the respective outcome variable. We also probed quadratic and cubic trajectories for exploratory purposes. We then added the person-means of positive and negative work events as cross-level

moderators, which tests whether differences in the trajectory of work engagement (slope of time) can be explained by the amount of positive and negative events experienced by each person over time. Whereas the person-means as covariates depict differences in characteristic average levels of work engagement due to frequent exposure to work events, the trajectories can be interpreted as increases or decreases in weekly work engagement over time.

3. Results

In a first step, we examined whether each type of positive and negative work events had occurred or not (once or several times vs. not at all during the workweek) and how frequently these events had occurred over the course of the 15 weeks. With regard to positive events we found that positive events occurred more frequently than negative events. Positive events ranged from more than 335 occurrences (work-related good news) to more than 828 occurrences (goal attainment, problem-solving and task-related success). Negative events ranged from more than 327 occurrences (problems in interactions with clients) to more than 460 occurrences (ambiguity, insecurity, and loss of control). Average frequencies for each type of event are displayed in Table 1 for descriptive purposes. Whereas positive events occurred on average several times a week, negative events occurred on average less than once a week during the period studied.

3.1. Short-Term Effects of Work Events

Addressing the first set of hypotheses, we specified Model 1, in which work engagement (in week n) was regressed on the main effects of concurrent (week n) and lagged work events (week n-1), the interactions among positive events (satiation or intensification) and among negative events (adaptation or sensitization). We found that models including auto-regressive and heteroscedasticity specification did not improve model fit [63] and did not alter the pattern of results. Therefore, we omitted these specifications from the focal models. Results are depicted in Table 3. We found a positive relationship between positive events during the workweek and work engagement ($\gamma = .74$, $t = 12.52$, $p < .001$) at the intraindividual level. Concurrent negative events were unrelated to work engagement ($\gamma = .07$, $t = .86$, $p > .10$). We did not find evidence for lagged main effects of work events from week n-1 to week n. That is, neither positive nor negative events carried over to affect work engagement from one week to the next. Furthermore, concurrent positive events did not interact with lagged positive events ($\gamma = -.07$, $t = -.61$, $p > .10$). Hence, in contrast to Hypothesis 1 we found neither sensitization nor satiation effects of positive events. In a similar way concurrent negative events did not significantly interact with lagged negative events to predict work engagement ($\gamma = -.07$, $t = -.07$, $p > .10$). Hence, in contrast to Hypothesis 2 we found neither sensitization nor satiation effects of negative events. Repeated exposure to positive events does not change the way positive events affect work engagement in the next week. The same is true for negative events.

Table 1. Correlations Among Study Variables at the Intraindividual Level

	Variable	*ICC*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Goal attainment, problem-solving, task-related success	.40		**.60**	**.28**	**.39**	**.45**	-.06	.05	**.07**	-.04	-.06	.01	**.74**	-.01	**.38**
2.	Perceived competence in or through social interactions	.47	**.62**		**.25**	**.41**	**.56**	-.02	-.07	.03	-.05	**-.16**	**-.12**	**.77**	**-.10**	**.45**
3.	Work-related good news	.30	**.28**	**.23**		**.27**	**.36**	-.03	.03	.04	**.09**	-.02	-.02	**.56**	.03	**.23**
4.	Passively experienced positive events	.46	**.40**	**.40**	**.27**		**.54**	-.02	**-.09**	**-.07**	**-.15**	**-.18**	**-.25**	**.76**	**-.20**	**.45**
5.	Praise, appreciation, positive feedback	.44	**.50**	**.60**	**.35**	**.56**		-.02	**.07**	-.02	.04	**-.10**	**-.09**	**.82**	-.02	**.43**
6.	Technical difficulties, problems with work tools and equipment	.45	-.07	.00	-.05	.02	.00		**.07**	.05	**.18**	**.26**	**.15**	-.04	**.46**	**-.13**
7.	Hindrances in goal attainment, obstacles in completing work tasks, overload	.39	**.12**	-.02	.03	-.08	**.13**	.01		**.36**	**.44**	**.33**	**.23**	.00	**.67**	-.04
8.	Problems in interactions with clients or patients	.41	.05	.00	.00	-.06	-.03	.00	**.39**		**.20**	**.30**	**.22**	.01	**.54**	.04
9.	Ambiguity, insecurity, loss of control	.45	-.04	-.03	**.10**	**-.13**	.08	**.18**	**.44**	**.18**		**.45**	**.37**	-.04	**.71**	**-.15**
10.	Conflicts and communication problems	.43	-.07	**-.16**	.00	**-.16**	-.06	**.27**	**.35**	**.37**	**.43**		**.51**	**-.15**	**.74**	**-.13**
11.	Managerial and internal problems, organizational climate	.49	.05	**-.10**	.03	**-.23**	-.04	**.10**	**.27**	**.26**	**.33**	**.46**		**-.14**	**.64**	**-.15**
12.	Positive events	.53	**.75**	**.77**	**.54**	**.76**	**.84**	-.02	.05	-.02	-.01	**-.13**	**-.10**		**-.09**	**.54**
13.	Negative events	.57	**.02**	-.08	.03	**-.17**	.03	**.43**	**.69**	**.55**	**.70**	**.74**	**.63**	-.05		**-.15**
14.	Work engagement	.61	**.31**	**.42**	**.18**	**.37**	**.36**	**-.12**	-.04	.07	**-.17**	**-.09**	**-.11**	**.45**	**-.13**	
15.	Work engagement (lagged)	--	**.42**	**.48**	**.24**	**.46**	**.42**	**-.13**	-.01	**.09**	**-.17**	-.08	-.08	**.56**	**-.11**	**.67**

Note. Correlations above the diagonal are week-level correlations in the full sample ($k = 849$). Correlations below the diagonal are week-level correlations in the matched sample ($k = 490$). Correlations in bold type are significant at $p < .05$.

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Table 2. Means, Standard Deviations, and Correlations Among Study Variables at the Interindividual Level

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	Gender[ab]	.77	.42		-.06	.02	.03	.02	.00	.09	-.07	-.12	-.05	.04	-.01	-.03	.04	-.06	.02
2.	Age in years[b]	35.75	10.38	-.01		-.06	.13	.04	.06	-.04	-.01	.00	-.04	**-.28**	-.15	-.14	.04	-.16	.11
3.	Goal attainment, problem-solving, task-related success	3.17	0.87	.15	-.04		**.53**	**.38**	**.44**	**.37**	**-.13**	**-.19**	.07	-.14	-.14	-.10	**.69**	-.16	**.45**
4.	Perceived competence in or through social interactions	3.37	0.86	.12	.10	**.72**		**.39**	**.51**	**.64**	-.05	**-.22**	.09	**-.19**	**-.23**	**-.22**	**.82**	**-.21**	**.48**
5.	Work-related good news	1.53	0.75	-.03	.03	**.41**	**.40**		**.41**	**.49**	-.05	**-.17**	.07	-.04	-.05	-.11	**.67**	-.09	**.50**
6.	Passively experienced positive events	2.59	1.11	.05	.07	**.49**	**.59**	**.36**		**.61**	-.08	**-.17**	.02	**-.29**	**-.23**	**-.34**	**.80**	**-.27**	**.67**
7.	Praise, appreciation, positive feedback	2.47	1.03	.05	.04	**.45**	**.68**	**.51**	**.72**		-.12	**-.22**	-.02	-.10	**-.26**	**-.20**	**.83**	**-.23**	**.63**
8.	Technical difficulties, problems with work tools and equipment	1.76	0.98	-.02	-.07	-.16	**-.32**	.01	-.18	-.19		**.28**	**.18**	**.27**	**.43**	**.34**	-.11	**.61**	**-.23**
9.	Hindrances in goal attainment, obstacles in completing work tasks, overload	1.85	1.1	-.10	-.07	**-.21**	**-.29**	-.10	**-.24**	-.14	**.36**		**.42**	**.48**	**.42**	.15	**-.25**	**.67**	-.13
10.	Problems in interactions with clients or patients	1.56	0.82	.00	-.05	-.06	-.14	.04	-.19	-.17	.16	**.46**		**.21**	**.30**	**.18**	.06	**.53**	-.06
11.	Ambiguity, insecurity, loss of control	1.9	0.98	-.03	**-.27**	-.15	**-.29**	.00	**-.37**	-.19	**.45**	**.56**	**.30**		**.58**	**.52**	**-.21**	**.76**	**-.22**
12.	Conflicts and communication problems	1.6	0.83	-.07	-.18	-.16	**-.40**	.01	**-.34**	**-.31**	**.59**	**.55**	**.39**	**.67**		**.67**	**-.25**	**.83**	**-.26**
13.	Managerial and internal problems, organizational climate	1.63	0.92	-.09	-.15	-.11	**-.33**	-.06	**-.47**	**-.28**	**.38**	**.28**	**.24**	**.65**	**.65**		**-.26**	**.71**	**-.27**
14.	Positive events	2.63	0.68	.09	.05	**.77**	**.86**	**.64**	**.82**	**.86**	**-.22**	**-.25**	-.14	**-.27**	**-.32**	**-.33**		**-.26**	**.72**
15.	Negative events	1.72	0.59	-.08	-.19	**-.20**	**-.40**	-.03	**-.41**	**-.29**	**.68**	**.72**	**.55**	**.83**	**.88**	**.74**	**-.35**		**-.29**
16.	Work engagement	2.42	1.05	.01	.09	**.50**	**.61**	**.45**	**.70**	**.66**	**-.27**	-.12	-.10	**-.28**	**-.27**	**-.33**	**.75**	**-.32**	

Note. Correlations above the diagonal are person-level correlations in the full sample (n = 135). Correlations below the diagonal are person-level correlations in the matched sample (n = 101). Correlations in bold type are significant at $p < .05$.

[a] 0 male, 1 female; [b] for gender and age $N = 131$ (full sample) and $N = 99$ (matched sample)

Table 3. Results from Multilevel Analysis Predicting Work Engagement

Parameter	Model 1				Model 2			
	γ	*SE*	*t*		γ	*SE*	*t*	
Level 2 (person-level)								
Intercept	2.44	0.07	33.62		2.43	0.07	33.50	
Person-mean positive events	1.21	0.13	9.64	***	1.21	0.12	9.70	***
Person-mean negative events	-0.12	0.13	-0.92		-0.13	0.13	-0.97	
Level 1 (week-level)								
Time	0.00	0.01	0.33		0.00	0.01	0.43	
Positive events (lagged week n-1)	0.03	0.06	0.49		0.03	0.06	0.57	
Negative events (lagged week n-1)	0.02	0.08	0.24		-0.02	0.08	-0.20	
Positive events (week n)	0.74	0.06	12.52	***	0.72	0.06	12.12	***
Negative events (week n)	0.07	0.08	0.86		0.06	0.08	0.77	
Interactions								
Positive events x lagged positive events	-0.07	0.11	-0.61		-0.09	0.12	-0.76	
Negative events x lagged negative events	-0.02	0.20	-0.07		-0.05	0.20	-0.24	
Positive x lagged negative events					0.40	0.15	2.69	**
Negative events x lagged positive					0.10	0.17	0.59	
Variance components								
Level 2 intercept variance	0.32				0.33			
Positive events slope variance	0.01				0.02			
Negative events slope variance	0.02				0.01			
Lagged negative events slope variance	0.06				0.06			
Level 1 intercept variance	0.26				0.25			
Deviance (*df*)	920.43			(21)	913.27		*	(23)
AIC	962.43				959.27			
BIC	1050.51				1055.74			

Note. *SE* = standard error. *df* = degrees of freedom. * $p < .05$. ** $p < .01$. *** $p < .001$. Deviance = (-2 Residual Log Likelihood). AIC = Akaike information criterion. BIC = Bayesian information criterion

Addressing Hypothesis 3 (contrast after negative events) and 4 (buffering effect) we examined the interactions of lagged negative events x current positive events and of lagged positive events x current negative events. In line with Hypothesis 3, we found that lagged negative events and concurrent positive events interact to predict work engagement (γ = -39, t = 2.36, p = .008). The pattern of the interaction is depicted in Figure 2 and suggests that frequent negative events in the last week amplify the positive association between positive events and work engagement in the current week (Simple slopes: γ low negative events = .60, t = 7.70, p < .001, γ high negative events = .86, t = 11.41, p < .001). Gains in work engagement at the week-level due to positive events are greatest in weeks when many negative events have preceded in the week before. In contrast to Hypothesis 4, lagged positive events did not change the effects of concurrent negative events (γ = .11, t = .67, p > .10). In sum, our results are compatible with the basic idea of a contrast effect after negative events. However, we did not find evidence for sensitization or satiation effects across weeks.

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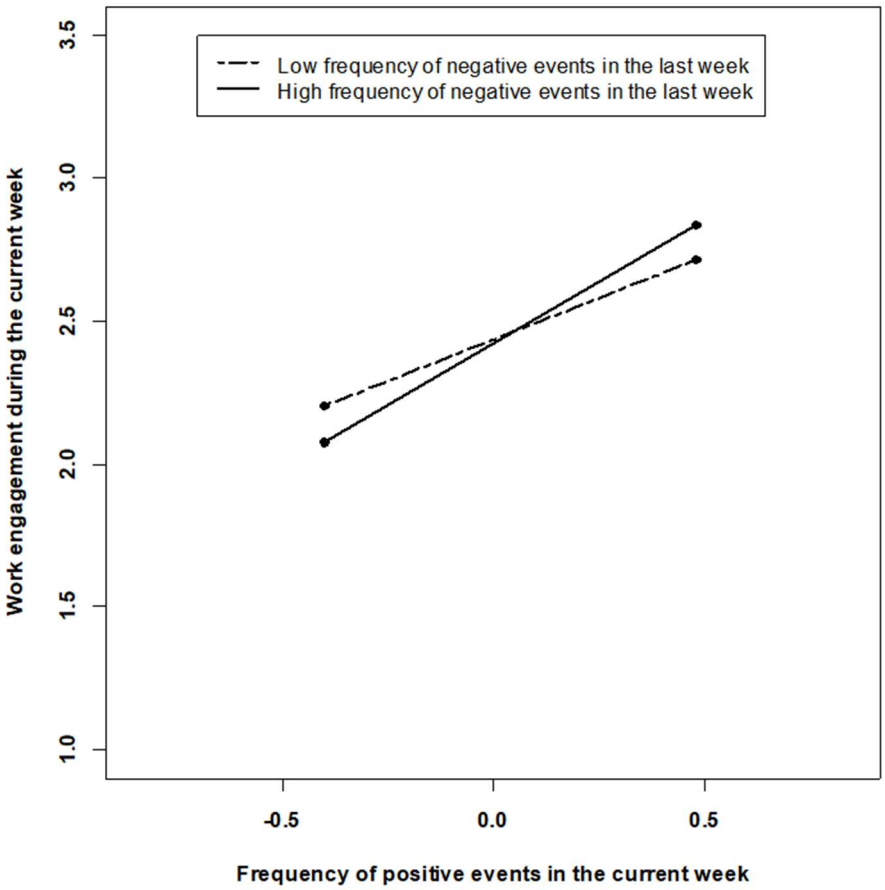

Figure 2. Interaction of current positive and lagged negative events at the week-level

3.2. Mid-Term Changes in Work Engagement Due to Work Events

Results from linear growth curve models predicting changes in work engagement over time are shown in Table 4 (Growth Model 1). In a first step, we found a significant negative effect of time (γ = -.01, t = -2.05, p = .04), indicating that on average work engagement slightly decreases over the period of four months. Given that we found significant slope variance, we considered the frequency of positive and negative events over time as cross-level moderators in Growth Model 2. In line with Hypothesis 5, positive events were predictive of the slope of time (γ = .03, t = 1.97, p = .04). In contrast, negative events did not contribute to explain slopes in work engagement over time (γ = -.02, t = -1.13, p > .10). The trajectories of work engagement over the course of time dependent upon accumulation of positive events are depicted in Figure 3. Inspection of the slopes reveals that lower frequencies of positive events over time are related to steeper decreases in work engagement over time, whereas work engagement remains constant when high frequencies of positive events occur. Further inspection of simple slopes using tools developed by [64] suggests that work engagement decreases when the frequency of positive events over time is close to the grand-mean or below and that work engagement might even increase when very high frequencies of positive events are present (region of significance -.01 > w > 1.57) (Simple slopes: γ low positive events = -.03, t = 2.97, p < .01, γ high positive events = -.00, t = .04, p > .10). Besides the trajectories over time, the person-mean of positive events was also predictive of the intercept (γ = .98, t = 8.36, p < .001). That is, differences in individual "characteristic average levels" [20] of work engagement were attributable to the frequency of positive events over time. Work engagement was higher for individuals who experienced positive events more frequently over the period of four months.

Table 4. Growth Curve Modeling Analysis Predicting Trajectories of Work Engagement Over Time

Parameter	Growth Model 1				Growth Model 2			
	γ	*SE*	*t*		γ	*SE*	*t*	
Level 2 (person-level)								
Intercept	2.48	0.06	38.36		2.47	0.06	38.63	
Person-mean positive events	1.11	0.10	11.58	***	0.98	0.12	8.36	***
Person-mean negative events	-0.18	0.11	-1.70		-0.11	0.13	-0.91	
Level 1 (week-level)								
Time	-0.01	0.01	-2.05	*	-0.01	0.01	-2.20	*
Cross-level interactions								
Person-mean positive events x time					0.03	0.01	1.97	*
Person-mean negative events x time					-0.02	0.02	-1.13	
Variance components								
Level 2 intercept variance	0.34				0.33			
Time slope variance	0.00				0.00			
Level 1 intercept variance	0.39				0.39			
Deviance (*df*)	1857.86	***	(8)		1850.93	*	(10)	
AIC	1873.86				1870.93			
BIC	1911.82				1918.37			

Note. SE = standard error. df = degrees of freedom. * p < .05. ** p < .01. *** p < .001. Deviance = (-2 Residual Log Likelihood). AIC = Akaike information criterion. BIC = Bayesian information criterion

3.3. Additional Analyses

We ran a couple of additional analyses to scrutinize the robustness of our results, to address potential alternative explanations, and to explore additional issues related to the link between work events and work engagement. First, to rule out systematic bias due to missing data, we reran Models 1 through 4 using sub-samples of participants, who had provided either at least 8 (n = 51) or 10 (n = 39) out of 15 weekly reports. The pattern of results did not differ from our focal analyses. That is, all main effects and interactions remained significant. These findings suggest that the number of missing observations did not systematically affect the focal results and implies that the focal effects are robust. Models using a sub-sample of participants who provided at least 12 reports per person yielded convergence problems in Model 2 due to the low number of participants (n = 20) and fall below the threshold for minimum sample sizes at Level 2. Detailed results of the supplemental analyses will be provided upon request to the first author.

Second, in our focal analyses, we have combined different types of positive events to a global measure of positive events and we applied the same strategy to negative events. This approach helps draw comparisons to prior research that has distinguished between positive vs. negative events in general terms. However, in our study we applied an 11-item work-events checklist and also included two items referring to off-job events, namely health-related problems and negative news in employees` private lifes. Hence, our study allows for a more fine-grained analysis of the relative strength of association between work events and work engagement. Whereas prior research basically tells us that positive events tend to be beneficial for work engagement, it would be interesting to know, which types of events may be most relevant for work engagement at the week-level and hence, which classes of events are actual drivers of work engagement. Following a similar analytic strategy as in prior research on the comprehensive work events taxonomy [6], we

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ran multilevel models and regressed work engagement at the week-level on all types of work events. We applied the full sample for these analyses and specified random intercepts and fixed slopes for each type of work event, because the sample sizes at both levels of analysis do not permit specifying eleven random slopes within the same model. The results are displayed in Table 5. In essence, we found almost all types of positive work events uniquely contribute to explain variance in week-level work engagement. More specifically, goal attainment events (γ = .23, t = 6.69, p < .001), passively experienced positive events (γ = .16, t = 5.59, p < .001), and episodes of praise, appreciation, and positive feedback (γ = .20, t = 6.45, p < .001) were positively related to levels of work engagement. Furthermore, perceived competence through social interactions was significantly related to higher levels of work engagement at the week-level, too (γ = .07, t = 1.97, p = .049), albeit the coefficient was a bit lower than for the other work events. By contrast, negative events were unrelated to week-level work engagement, except for episodes of ambiguity, insecurity and loss of control. Interestingly, the coefficient for this type of negative work event was positive rather than negative (γ = .07, t = 2.11, p = .034. Hence, this type of negative event contributes to enhance rather than diminish work engagement, when considered in concert with all other types of work events. As the other negative work events, negative off-job events did not yield significant associations with work engagement.

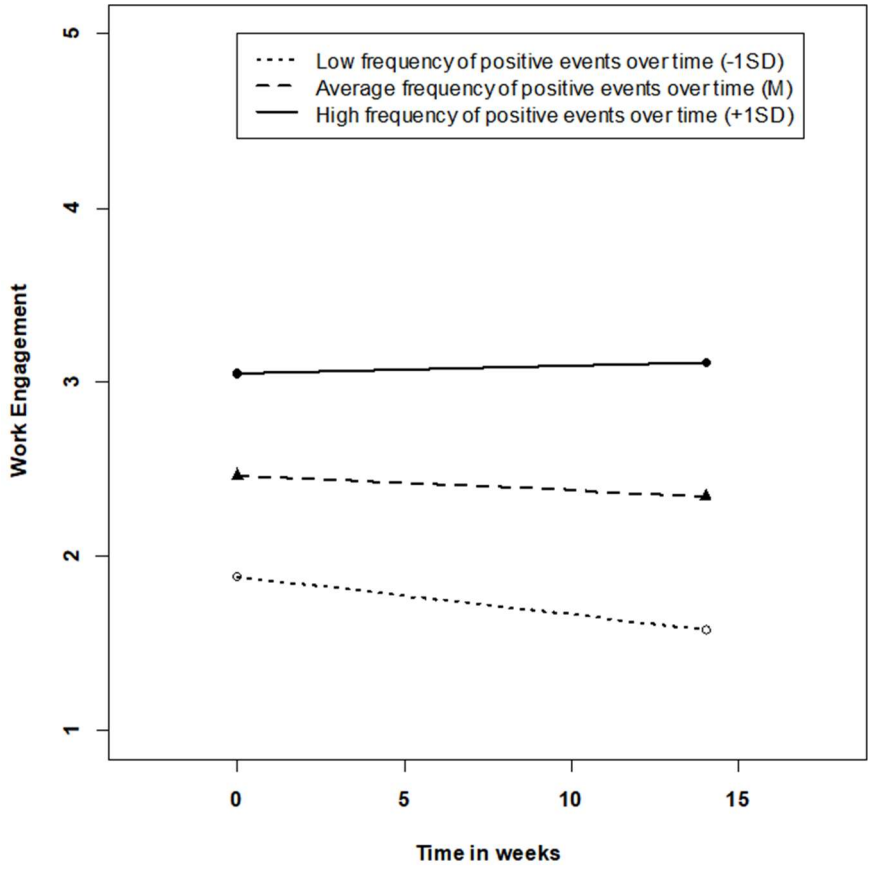

Figure 3. Trajectories of work engagement over 15 weeks dependent upon accumulation of positive events over time.

Third, our study provides the opportunity to assess whether associations between positive work events and work engagement within the same week are due to common method bias only. More specifically, we leveraged the matched sample and ran an alternative version of Model 2 regressing work engagement in week n on positive and negative work events in week n, lagged positive and negative work events in week n-1 controlling for work engagement in week n-1. In

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other words, we controlled for prior levels of the outcome variable when predicting week-level work engagement. Finding significant associations between our focal predictors and work engagement under these circumstances would facilitate interpretation of results as work events predicting changes in work engagement rather than both phenomena co-occurring at the same time. The results are presented in Table 6. In essence, we found the same pattern of results as in our focal analyses. That is, the main effect of positive work events at Level 1 (γ = .72, t = 12.19, p < .001) and the interaction at Level 1 remained significant (γ = .37, t = 2.43, p = .015). Not surprisingly, previous week's work engagement was positively linked to current week's work engagement (γ = .27, t = 6.29, p < .001). Of note however, the inclusion of work engagement from the previous week resulted in a significant lagged effect of positive events in week n-1 on work engagement in week n (γ = -.19, t = -2.85, p = .005).

Finally, we probed whether positive and negative events interact *within the same week* to predict work engagement. This perspective would be in line with the perspective of prior research on work events, that has not accounted for the order of events (e.g., [19]). Moreover, this kind of concurrent work events interaction corresponds to the perspective taken in experience-sampling research on job demands and resources. We specified an alternative version of Model 2 including the interaction of positive x negative events within the same week. In essence, when analyzing the full sample we found evidence for the positive link between positive events and work engagement at the week-level (γ = .69, t = 13.35, p < .001) and that positive and negative events interact to predict work engagement (γ = -.31, t = -2.76, p = .006). Inspection of the simple slopes confirms that within the same week negative events alleviate the link of positive events and work engagement. However, when analyzing concurrent interactions across two consecutive weeks in the matched sample including all combinations of positive events, negative events, and lagged positive events and lagged negative events, we found no interactions of concurrent positive and negative events within the same week (γ = -.13, t = -0.83, p = .41). These supplemental analyses suggest that the pattern of interaction of concurrent positive and negative events is opposite to the pattern of interaction when taking into account the order of events. Negative events alleviate the link between positive events, when measured concurrently with positive events. However, negative events amplify the link between positive events and work engagement, when measured prior to positive events.

Table 5. Results from Multilevel Analysis Predicting Work Engagement by Specific Positive and Negative Events Within the Same Week

Parameter	Model 3			
	γ	*SE*	*t*	
Level 1 (week-level)				
Intercept	2.37	0.08	28.38	
Time	0.00	0.01	0.46	
Goal attainment, problem-solving, task-related success	0.23	0.03	6.70	***
Perceived competence in or through social interactions	0.07	0.03	1.97	*
Work-related good news	0.05	0.03	1.58	
Passively experienced positive events	0.16	0.03	5.59	***
Praise, appreciation, positive feedback	0.20	0.03	6.45	***
Technical difficulties, problems with work tools and equipment	0.00	0.03	0.17	

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	Health Complaints	-0.01	0.02	-0.30	
	Private issues	-0.02	0.03	-0.51	
	Hindrances in goal attainment, obstacles in completing work tasks, overload	-0.04	0.03	-1.52	
	Problems in interactions with clients or patients	0.03	0.04	0.80	
	Ambiguity, insecurity, loss of control	0.07	0.03	2.12	*
	Conflicts and communication problems	-0.01	0.04	-0.25	
	Managerial and internal problems, organizational climate	0.03	0.03	0.10	
Variance components					
	Level 2 intercept variance	0.77			
	Time slope variance	0.00			
	Level 1 intercept variance	0.27			
Deviance (*df*)			1693.77		(19)
AIC			1731.77		
BIC			1821.91		

Note. *SE* = standard error. *df* = degrees of freedom. * $p < .05$. ** $p < .01$. *** $p < .001$. Deviance = (-2 Residual Log Likelihood). AIC = Akaike information criterion. BIC = Bayesian information criterion

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Table 6. Results from Multilevel Analysis Predicting Work Engagement in Week n Controlling for Work Engagement in Week n-1

Parameter	Model 4			
	γ	*SE*	*t*	
Level 2 (person-level)				
Intercept	1.78	0.12	14.75	
Person-mean positive events	0.90	0.11	8.16	***
Person-mean negative events	-0.09	0.10	-0.91	
Level 1 (week-level)				
Time	0.00	0.01	0.27	
Positive events (lagged week n-1)	-0.19	0.07	-2.85	*
Negative events (lagged week n-1)	-0.05	0.08	-0.60	
Positive events (week n)	0.73	0.06	12.19	***
Negative events (week n)	0.03	0.08	0.37	
Work Engagement (lagged week n-1)	0.27	0.04	6.29	***
Interactions				
Positive events x lagged positive events	-0.05	0.12	-0.45	
Negative events x lagged negative events	0.02	0.21	0.08	
Positive x lagged negative events	0.37	0.15	2.43	*
Negative events x lagged positive	0.08	0.18	0.46	

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Variance components			
Level 2 intercept variance	0.17		
Positive events slope variance	0.01		
Negative events slope variance	0.04		
Lagged negative events slope variance	0.07		
Level 1 intercept variance	0.27		
Deviance (*df*)		889.48	(24)
AIC		937.48	
BIC		1038.14	

Note. *SE* = standard error. *df* = degrees of freedom. * $p < .05$. ** $p < .01$. *** $p < .001$. Deviance = (-2 Residual Log Likelihood). AIC = Akaike information criterion. BIC = Bayesian information criterion

4. Discussion

In this study, we have examined how positive and negative events dynamically interact to predict fluctuations in work engagement from week to week. Notably, we have added a temporal component [18], which might resolve inconsistent findings in prior research. Furthermore, our study is among the first to explicitly consider whether the accumulation of work events is predictive of mid-term trajectories of work engagement over a period of four months. Our approach complements prior research on job demands and resources as more distal feature-oriented antecedents of work engagement [11,65] and provides a more nuanced picture of the interplay of positive and negative events over time.

First, our results extend prior research, which has reported that negative events may, under certain circumstances, be beneficial for work engagement, dependent upon what happens afterwards [18]. The present study contributes to clarify the dynamics underlying these seemingly paradoxical effects [16]. Specifically, our results suggest that the occurrence of positive events is tightly related to high levels of work engagement and that current positive events affect work engagement particularly in the light of recent negative events. High levels of work engagement result from a contrast that evolves when experiencing positive events in the aftermath of negative events. The amplifying effect of recent negative events on the association between current positive events and work engagement is consistent with research on the affective-shift model of work engagement [18] and is also in line with the interplay of job demands and job resources as postulated in job demands-resources theory [5]. However, taking into account the order of positive and negative events provides a more differentiated picture. Whereas recent negative events interacted with current positive events, recent positive events did not interact with current negative events to predict work engagement. So, timing of positive and negative events may play a crucial role. In this sense, our results illustrate the value of studying the experience of work through the lens of work events and taking the order of events into account. Our results suggest that, for instance, experiencing support after struggling with overload results in different levels of work engagement than facing overload in the aftermath of support. In feature-oriented research on job demands and resources researchers usually do not account for this distinction. Our results suggest that we need to consider these temporal aspects to avoid inconsistent results in the future. Our supplemental analyses show that while negative events alleviate the link between positive events and week-level work engagement, negative events amplify the link between positive events and work engagement, when negative events precede positive events. In this sense, our study may help explain why interactions of demands and resources have emerged in some studies, but have not been found in other studies applying feature oriented approaches to the interplay of job characteristics measured concurrently. One reason for these inconsistencies may be that measures applied in feature-oriented

research neglect the temporal order of relevant events and result in mixed findings, depending on which timeframe employees have in mind when thinking about time pressure, organizational constraints, perceived progress towards goal attainment or praise from the supervisor.

Given that we did not find sensitization or satiation effects neither for positive nor for negative events, obviously, gains in work engagement do not result from a contrast between currently low frequencies of negative events vs. high frequencies of negative events in the previous week (adaptation). In the same way, positive events of the previous week do not alter the impact of this week's positive events on work engagement (intensification), but negative events of the previous week do. Importantly, whereas positive events yielded strong direct short-term associations with work engagement, negative events merely acted as the background for positive events, which amplifies the gains due to positive events – a pattern similar to the effects of positive events on fatigue in the face of high job demands [19]. Furthermore, our analysis of lagged effects from one week to the next suggests that work events apparently do not directly carry over from the previous week to the next week. Associations of positive and negative events with work engagement found in prior day-level research [14,18], therefore, seem to reflect short-lived effects, which fade out rather quickly within a couple of hours [3]. Admittedly, our measures of work events were focused on mundane rather than exceptional work events and therefore may underestimate how long the beneficial or detrimental effects may actually last. The impact of work events varies as a function of event strength and event duration [1,66]. For instance, the impact of novel or highly disruptive events like psychological contract breach [36] may not fade out after a couple of hours or days, but will likely take longer [1]. Our supplemental analyses on unique links of work events with work engagement within the same week suggest that almost all types of positive events quite consistently covary with work engagement.

Second, we rigorously tested whether work events yield sustained – and hence, practically meaningful, significant changes in employee engagement [20]. More specifically, our approach taps into accumulation effects over time. Given that knowledge about accumulation effects and the timing of both positive and negative events is scarce our results add to current theoretical perspectives [1,66]. We found that on average, work engagement tends to decrease and frequent exposure to positive events over time is associated with slower rates of change over time or constantly high levels of work engagement. For high frequencies of positive events a flat linear trend results – a pattern described as "passageway trajectory" in the literature (cf.[24]). The general downward trend is in line with the notion that work is associated with investment and thereby consumption of resources over time. Our results are in line with research, which has provided evidence for "some downward pressure on the general upward trend" [24]. This downward trend is also consistent with declining trajectories in variables related to work engagement. For instance, the organizational socialization [67,68] and voluntary turnover literature [69] literature suggests that there may be slow declining trajectories after being very enthusiastic as a newcomer, for instance due to the accumulation of minor events. Interestingly, our results imply that this downward trend may be compensated for by high frequencies of positive events. By contrast, in our study negative events did not accumulate to affect work engagement over time. This finding has important implications for understanding the role of positive events for building and sustaining high levels of engagement. Sustained high levels of work engagement over time are dependent upon being fed by frequent positive experiences. In the absence of continuous reinforcement [24], work engagement is likely to fade and decline quite substantially within the daily grind. In this sense, particularly positive events can be considered key drivers to maintaining and fostering engagement.

4.1. Practical Implications

From a practical perspective, our findings suggest that the impact of single mundane work events across time may be quite limited. In other words, it is unlikely that single events undermine or boost the individual level of work engagement. This result is also in line with research on recovery from shock events [36]. However, the frequent occurrence of mundane positive events

accumulates to sustain the level of work engagement over periods of several weeks or months. According to our results, in the face of adversity, creating opportunities for positive events afterwards is superior to avoiding additional negative events to happen.

Supervisors might acknowledge their followers' progress towards goal accomplishment as an element of routine communication [e.g., 70] to foster positive events. Our suggestion coincides with facets of transactional leadership, such as contingent reward and proactive forms of management by exception [71] and stresses the importance of these leadership behaviors in daily job routine. In more general terms, organizations might develop structures and routines that facilitate positive events at work to happen. For instance, adequate job design [72] and optimal employee training are likely to contribute to experiencing successful task completion and positive feedback from others. Beyond goal attainment and successful mastery of job tasks, team meetings have a high potential to act as opportunities for positive social exchange that might constantly feed work engagement over time [see 6].

4.2. Strengths and Limitations

The key strength of our study is that we applied an intensified longitudinal design over a period of four months and rigorous methods for analyzing data. We conducted a series of robustness checks and supplemental analyses qualify our core results. However, we had to rely on self-reports only, and our week-level design implied that retrospective reports referred to overall assessments of either the whole workweek, an approach that may come at the cost of retrospective bias [73]. On the other hand, we aimed to go beyond analysis of very short periods at the day-level, because we wanted to capture the impact of rare but potentially powerful events [cf. 28] and we intended to link transient processes to longer-term processes [20]. For instance, quits by colleagues or significant positive team events like informal gatherings for the celebration of a colleague's birthday usually do not occur within a few days, but may be important aspects of organizational life [1], likely to be overlooked in episodic or day-level studies. The relatively low prevalence of negative events displayed in Table 1 of less than one occurrence of each type of negative event per week on average suggests that the mid-term time frame of several weeks to months is in line with the relatively rare occurrence of work events which are strong enough to yield sustainable effects over time. Moreover, our supplemental analyses suggest that the associations between positive work events and work engagement within the same week are not purely a result of method-variance [74]. Results hold when controlling for prior levels of work engagement. Although, researchers have recently suggested that affective events may be the result of affect(ive experiences), rather than the other way around [75], the idea of work events affecting affective states, such as work engagement is consistent with the basic tenets of affective events theory [12]. Our results are compatible with this more traditional view.

We have a high percentage of missing data. We obtained weekly reports for roughly half of the theoretically possible number of observations. This limitation is due to the high number of repeated observations within our ambitious design (fifteen diary surveys in total) which covered a period of almost four months. However, our random coefficient modeling approach does not hinge on listwise deletion and is apt to handle missing data. On average, each participant still provided more than six (and nearly five lagged) observations covering periods of at least two months. Furthermore, our supplemental analyses suggest that our results are not dependent upon the number of missing observations. Taken together, we believe that our results are valid despite the missing data.

Although, our study is among the first to study events based on the work events taxonomy by Ohly and Schmitt [6], we have not distinguished between different clusters of work events (e.g., goal attainment vs. praise or perceived competence) in our focal analyses. Consequently, rather than doing a fine-grained analysis of interactions among the five specific positive and six specific negative work-related event clusters identified, our study is meant to provide insights in general patterns of how positive and negative events (irrespective of their specific content) interact to predict work engagement (for a similar approach see [18]).

On a related note, several authors [1,66] have argued that the strength of events varies as a function of novelty, disruption, and criticality and should be considered to understand the impact of particular events with regard to individual level or organizational level outcomes. We did not monitor and incorporate these kinds of event characteristics in this study as our focus was on the dynamic interplay of the quantity of work events over time. However, we consider our study a first step towards a better understanding of the dynamics of work events per se, which provides the basis for further scrutiny in the next step.

4.3. Implications for Future Research

Although, our study has addressed several gaps in the literature, a couple of unresolved issues remain to be considered in future research. While some researchers have found negative events to predict lower levels of work engagement [14,see also Table 3 in 18], we did not find direct and lagged effects of negative events on average. These inconsistencies may be due to differences in the way work events were measured (open answer format vs. event checklist) or due to different time lags applied (day-level vs. week-level) [3]. For instance, Bone and colleagues [23] provided evidence that the impact of work events on employee health may differ quite substantially dependent upon whether data are analyzed at the episodic or at the day-level. Accordingly, it may not be straightforward to generalize results from day-level research to longer time frames [76]. From our study, it is not quite clear whether negative events did not affect work engagement at all or whether the effects have faded out before assessing work engagement at the end of the workweek [3]. Day-level data over a period of several weeks would allow gaining a clearer picture of how long it takes until the effects of work events unfold or fade out [77]. Combining day-level and week-level perspectives would further contribute to close the gap between transient processes and longer-term processes discussed above [20]. As noted above, tracking indicators of event strength alongside the frequency of events may contribute to further reconcile contradictory findings and to integrate research on work events within event system theory [1].

On a related note, by definition work events are discrete and are meant to change the experience of work quite fundamentally and sustainably. Significant work events may even be triggers of transition processes, rather than predictors of minor short-term fluctuation in work engagement [12]. In this sense, future experience sampling research might apply discontinuous growth modeling approaches to account for the discrete nature of (rare, but potentially powerful affective) events [69] and study shifts in work engagement in addition to day-level fluctuation [78]. Further advancing discontinuous perspectives, drawing on recent research by Koopmann, Lanaj, Bono, and Campana (2016), who found regulatory focus to mediate short-term effects of positive and negative events on employee strain, and at the backdrop of our results, future research might also explore the role of shifts in regulatory focus for fluctuation in work engagement.

Although we have illustrated the dynamic interplay of positive and negative events using examples of events, which may refer to the same task (e.g., struggling with obstacles in a certain task in one week and successfully finishing the task in the consecutive week), we did not track whether the positive events in one week actually were related to the negative events in the preceding workweek. Future research might scrutinize whether compensatory effects are dependent upon a link between the positive and lagged negative events. Furthermore, personality traits such as positive affectivity might influence the relationships between positive and events, their interplay, and work engagement (Bledow et al., 2011) which needs to be taken into account in future studies.

5. Conclusion

Our study adds a temporal component to the research of work events and work engagement. More specifically, we provide evidence that recent negative events amplify the beneficial effects of current positive events on work engagement. Hence, studying the experience of work through the lens of work events over time [1] provides a better understanding of the contingencies and the

dynamic interplay that determine work engagement. Furthermore, this study links transient processes to longer-term processes underlying engagement and shows that positive events accumulate to feed continuously high levels of work engagement over periods of several months. Overall our study provides insights into how work events combine to affect work engagement over time. Notably, our results on mid-term changes in work engagement underscore the practical relevance of work events for employee well-being. We hope our study contributes to provide insights into the vital worker and will inspire further research on what happens at work through the lens of work events in the future.

Author Contributions: O.W., C.S., and A.S. planned the study together and prepared the focal materials. A.S. and S.O. provided the work events checklist. O.W. set up the electronic surveys, was in charge of communication with participants, collected the data, and was in charge of data preparation for analysis and all analyses. O.W. wrote the original draft. C.S., A.S. and S.O. commented on earlier versions of the manuscript. O.W. prepared all materials presented in this manuscript. O.W. handled the paper during the review process.

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References

1. Morgeson, F.P.; Mitchell, T.R.; Liu, D. Event system theory: An event-oriented approach to the organizational sciences. *The Academy of Management Review* **2015**, *40*, 515–537.
2. George, J.M.; Jones, G.R. The role of time in theory and theory building. *Journal of Management* **2000**, *26*, 657–684.
3. Mitchell, T.R.; James, L.R. Building better theory: Time and the specification of when things happen. *Academy of Management Review* **2001**, *26*, 530–547.
4. Sonnentag, S. Time in organizational research: Catching up on a long neglected topic in order to improve theory. *Organizational Psychology Review* **2012**, *2*, 361–368.
5. Bakker, A.B.; Demerouti, E. Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology* **2017**, *22*, 273–285.
6. Ohly, S.; Schmitt, A. What makes us enthusiastic, angry, feeling at rest or worried? Development and validation of an affective work events taxonomy using concept mapping methodology. *Journal of Business and Psychology* **2015**, *30*, 15–35.
7. Schaufeli, W.B.; Salanova, M.; González-Romá, V.; Bakker, A.B. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies* **2002**, *3*, 71–92.
8. Bakker, A.B. An evidence-based model of work engagement. *Current Directions in Psychological Science* **2011**, *20*, 265–269.
9. Christian, M.S.; Garza, A.S.; Slaughter, J.E. Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology* **2011**, *64*, 89–136.
10. Crawford, E.R.; LePine, J.A.; Rich, B.L. Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology* **2010**, *95*, 834–848.
11. Bakker, A.B. Daily fluctuations in work engagement: An overview and current directions. *European Psychologist* **2014**, *19*, 227–236.
12. Weiss, H.M.; Cropanzano, R. Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In *Research in organizational behavior: An annual series*

of analytical essays and critical reviews, Vol. 18.; Staw, B.M., Cummings, L.L., Eds.; Elsevier Science/JAI Press: Greenwich, CT, 1996; pp. 1–74 ISBN 1-55938-938-9.

13. Daniels, K. Rethinking job characteristics in work stress research. *Human Relations* **2006**, *59*, 267–290.
14. Kuba, K.; Scheibe, S. Let it be and keep on going! Acceptance and daily occupational well-being in relation to negative work events. *Journal of Occupational Health Psychology* **2017**, *22*, 59–70.
15. Wickham, R.E.; Knee, C.R. Examining temporal processes in diary studies. *Personality and Social Psychology Bulletin* **2013**, *39*, 1184–1198.
16. Fuller, J.A.; Stanton, J.M.; Fisher, G.G.; Spitzmüller, C.; Russell, S.S.; Smith, P.C. A lengthy look at the daily grind: Time series analysis of events, mood, stress, and satisfaction. *Journal of Applied Psychology* **2003**, *88*, 1019–1033.
17. Weiss, H.M.; Rupp, D.E. Experiencing work: An essay on a person-centric work psychology. *Industrial and Organizational Psychology: Perspectives on Science and Practice* **2011**, *4*, 83–97.
18. Bledow, R.; Schmitt, A.; Frese, M.; Kühnel, J. The affective shift model of work engagement. *Journal of Applied Psychology* **2011**, *96*, 1246–1257.
19. Gross, S.; Semmer, N.K.; Meier, L.L.; Kälin, W.; Jacobshagen, N.; Tschan, F. The effect of positive events at work on after-work fatigue: They matter most in face of adversity. *Journal of Applied Psychology* **2011**, *96*, 654–664.
20. Ilies, R.; Aw, S.S.Y.; Pluut, H. Intraindividual models of employee well-being: What have we learned and where do we go from here? *European Journal of Work and Organizational Psychology* **2015**, *24*, 827–838.
21. Meurs, J.A.; Perrewé, P.L. Cognitive activation theory of stress: An integrative theoretical approach to work stress. *Journal of Management* **2011**, *37*, 1043–1068.
22. Hobfoll, S.E. Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist* **1989**, *44*, 513–524.
23. Bono, J.E.; Glomb, T.M.; Shen, W.; Kim, E.; Koch, A.J. Building positive resources: Effects of positive events and positive reflection on work stress and health. *Academy of Management Journal* **2013**, *56*, 1601–1627.
24. Halbesleben, J.R.B.; Neveu, J.-P.; Paustian-Underdahl, S.C.; Westman, M. Getting to the "COR": Understanding the Role of Resources in Conservation of Resources Theory. *Journal of Management* **2014**, *40*, 1334–1364.
25. Sinclair, R.R.; Sliter, M.; Mohr, C.D.; Sears, L.E.; Deese, M.N.; Wright, R.R.; Cadiz, D.; Jacobs, L. Bad versus good, what matters more on the treatment floor? Relationships of positive and negative events with nurses' burnout and engagement. *Res Nurs Health* **2015**, *38*, 475–491.
26. Wang, N.; Zhu, J.; Dormann, C.; Song, Z.; Bakker, A.B. The daily motivators: Positive work events, psychological needs satisfaction, and work engagement. *Applied Psychology: An International Review* **2019**.
27. Beal, D.J.; Weiss, H.M.; Barros, E.; MacDermid, S.M. An episodic process model of affective influences on performance. *Journal of Applied Psychology* **2005**, *90*, 1054–1068.
28. Demerouti, E.; Cropanzano, R. The buffering role of sportsmanship on the effects of daily negative events. *European Journal of Work and Organizational Psychology* **2017**, *26*, 263–274.
29. Zerubavel, E. *The seven day circle: The history and meaning of the week*; First Prinitng edition.; University Of Chicago Press: Chicago, 1989; ISBN 978-0-226-98165-9.
30. Dormann, C.; van de Ven, B. Timing in methods for studying psychosocial factors at work. In *Psychosocial factors at work in the Asia Pacific.*; Dollard, M.F., Shimazu, A., Bin Nordin, R., Brough, P., Tuckey, M.R.,

Dollard, M.F. (Ed), Shimazu, A. (Ed), Bin Nordin, R. (Ed), Brough, P. (Ed), Tuckey, M.R. (Ed), Eds.; Springer Science + Business Media: New York, NY, US, 2014; pp. 89–116 ISBN 978-94-017-8974-5.

31. Meier, L.L.; Cho, E.; Dumani, S. The effect of positive work reflection during leisure time on affective well-being: Results from three diary studies. *J. Organiz. Behav.* **2016**, *37*, 255–278.
32. Ilies, R.; Keeney, J.; Goh, Z.W. Capitalising on positive work events by sharing them at home. *Applied Psychology: An International Review* **2015**, *64*, 578–598.
33. Diener, E.; Lucas, R.E.; Scollon, C.N. Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist* **2006**, *61*, 305–314.
34. Fredrickson, B.L.; Branigan, C. Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion* **2005**, *19*, 313–332.
35. Llorens, S.; Schaufeli, W.B.; Bakker, A.; Salanova, M. Does a positive gain spiral of resources, efficacy beliefs and engagement exist? *Computers in Human Behavior* **2007**, *23*, 825–841.
36. Solinger, O.N.; Hofmans, J.; Bal, P.M.; Jansen, P.G.W. Bouncing back from psychological contract breach: How commitment recovers over time. *Journal of Organizational Behavior* **2016**, *37*, 494–514.
37. Gump, B.B.; Matthews, K.A. Do background stressors influence reactivity to and recovery from acute stressors? *Journal of Applied Social Psychology* **1999**, *29*, 469–494.
38. Farmer, A.S.; Kashdan, T.B. Stress sensitivity and stress generation in social anxiety disorder: A temporal process approach. *Journal of Abnormal Psychology* **2015**, *124*, 102–114.
39. McEwen, B.S. Physiology and neurobiology of stress and adaptation: central role of the brain. *Physiol. Rev.* **2007**, *87*, 873–904.
40. Lazarus, R.S.; Folkman, S. Transactional theory and research on emotions and coping. *European Journal of Personality* **1987**, *1*, 141–169.
41. Seery, M.D.; Leo, R.J.; Lupien, S.P.; Kondrak, C.L.; Almonte, J.L. An upside to adversity? Moderate cumulative lifetime adversity is associated with resilient responses in the face of controlled stressors. *Psychological Science* **2013**.
42. Frese, M.; Zapf, D. Methodological issues in the study of work stress: Objective vs subjective measurement af work stress and the question of longitudinal studies. In *Causes, coping and consequences of stress at work*; Cooper, C.L., Payne, R., Eds.; Wiley: Chichester, 1988; pp. 375–411.
43. Bolger, N.; DeLongis, A.; Kessler, R.C.; Schilling, E.A. Effects of daily stress on negative mood. *Journal of Personality and Social Psychology* **1989**, *57*, 808–818.
44. Williams, K.J.; Suls, J.; Alliger, G.M.; Learner, S.M.; Wan, C.K. Multiple role juggling and daily mood states in working mothers: An experience sampling study. *Journal of Applied Psychology* **1991**, *76*, 664–674.
45. Folkman, S. The case for positive emotions in the stress process. *Anxiety, Stress & Coping: An International Journal* **2008**, *21*, 3–14.
46. Tsai, W.-C.; Chen, C.-C.; Liu, H.-L. Test of a model linking employee positive moods and task performance. *Journal of Applied Psychology* **2007**, *92*, 1570–1583.
47. Tice, D.M.; Baumeister, R.F.; Shmueli, D.; Muraven, M. Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology* **2007**, *43*, 379–384.
48. Grebner, S.; Elfering, A.; Semmer, N.K. The success resource model of job stress. In *New Developments in Theoretical and Conceptual Approaches to Job Stress*; Perrewé, P.L., Halbesleben, J.R.B., Rose, C., Eds.; Research in Occupational Stress and Well-being; Emerald Group Publishing Limited, 2010; Vol. 8, pp. 61–108.

49. Gorgievski, M.J.; Hobfoll, S.E. Work can burn us out and fire us up. In *Handbook of stress and burnout in health care*; Halbesleben, J.R.B., Ed.; Nova Publishers: Hauppage, New York, 2008; pp. 7–22.
50. Kühnel, J.; Sonnentag, S.; Bledow, R. Resources and time pressure as day-level antecedents of work engagement. *Journal of Occupational and Organizational Psychology* **2012**, *85*, 181–198.
51. MacCallum, R.C.; Browne, M.W. The use of causal indicators in covariance structure models: Some practical issues. *Psychological Bulletin* **1993**, *114*, 533–541.
52. Schaufeli, W.B.; Bakker, A.B.; Salanova, M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement* **2006**, *66*, 701–716.
53. Sonnentag, S. Recovery, work engagement, and proactive behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology* **2003**, *88*, 518–528.
54. Geldhof, G.J.; Preacher, K.J.; Zyphur, M.J. Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods* **2014**, *19*, 72–91.
55. Huang, F.L. Conducting Multilevel Confirmatory Factor Analysis Using R Available online: http://faculty.missouri.edu/huangf/data/mcfa/MCFAinRHUANG.pdf (accessed on Aug 1, 2017).
56. Raudenbush, S.W.; Bryk *Hierarchical linear models: Applications and data analysis methods*; Advanced qualitative techniques in the social sciences, 1; 2nd ed.; Sage Publications: Thousand Oaks, CA, 2002;
57. Pinheiro, J.C.; Bates, D.M. *Mixed-effects models in S and S-PLUS*; Statistics and Computing; Springer New York: New York, NY, 2000; ISBN 978-1-4419-0317-4.
58. Enders, C.K.; Tofighi, D. Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods* **2007**, *12*, 121–138.
59. Paccagnella, O. Centering or not Centering in multilevel models? The role of the group mean and the assessment of group effects. *Eval Rev* **2006**, *30*, 66–85.
60. West, S.G.; Ryu, E.; Kwok, O.-M.; Cham, H. Multilevel Modeling: Current and Future Applications in Personality Research. *Journal of Personality* **2011**, *79*, 2–50.
61. Chen, G.; Bliese, P.D.; Mathieu, J.E. Conceptual framework and statistical procedures for delineating and testing multilevel theories of homology. *Organizational Research Methods* **2005**, *8*, 375–409.
62. Kreft, I.G.G.; de Leeuw, J.; Aiken, L.S. The effect of different forms of centering in hierarchical linear models. *Multivariate Behavioral Research* **1995**, *30*, 1–21.
63. Bliese, P.D.; Ployhart, R.E. Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods* **2002**, *5*, 362–387.
64. Preacher, K.J.; Curran, P.J.; Bauer, D.J. Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics* **2006**, *31*, 437–448.
65. Bakker, A.B.; Demerouti, E. The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology* **2007**, *22*, 309–328.
66. Hoffman, E.L.; Lord, R.G. A taxonomy of event-level dimensions: Implications for understanding leadership processes, behavior, and performance. *The Leadership Quarterly* **2013**, *24*, 558–571.
67. Boswell, W.R.; Shipp, A.J.; Payne, S.C.; Culbertson, S.S. Changes in newcomer job satisfaction over time: Examining the pattern of honeymoons and hangovers. *Journal of Applied Psychology* **2009**, *94*, 844–858.
68. Boswell, W.R.; Boudreau, J.W.; Tichy, J. The Relationship Between Employee Job Change and Job Satisfaction: The Honeymoon-Hangover Effect. *Journal of Applied Psychology* **2005**, *90*, 882–892.

69. Lee, T.W.; Mitchell, T.R. An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review* **1994**, *19*, 51–89.
70. Kacmar, K.M.; Witt, L.A.; Zivnuska, S.; Gully, S.M. The interactive effect of leader-member exchange and communication frequency on performance ratings. *Journal of Applied Psychology* **2003**, *88*, 764–772.
71. Bass, B.M. From transactional to transformational leadership: Learning to share the vision. In *Leadership: Understanding the dynamics of power and influence in organizations.*; Vecchio, R.P., Ed.; University of Notre Dame Press: Notre Dame, IN US, 1997; pp. 318–333 ISBN 0-268-01316-0.
72. Grant, A.M.; Fried, Y.; Juillerat, T. Work matters: Job design in classic and contemporary perspectives. In *APA handbook of industrial and organizational psychology, Vol 1: Building and developing the organization.*; American Psychological Association: Washington, DC, 2010; pp. 417–453 ISBN 1-4338-0732-7.
73. Mitchell, T.R.; Thompson, L.; Peterson, E.; Cronk, R. Temporal adjustments in the evaluation of events: The "rosy view." *Journal of Experimental Social Psychology* **1997**, *33*, 421–448.
74. Spector, P.E. Method Variance in Organizational Research: Truth or Urban Legend? *Organizational Research Methods* **2006**, *9*, 221–232.
75. Casper, A.; Tremmel, S.; Sonnentag, S. The power of affect: A three-wave panel study on reciprocal relationships between work events and affect at work. *Journal of Occupational and Organizational Psychology 0*.
76. Dormann, C.; Griffin, M.A. Optimal time lags in panel studies. *Psychological Methods* **2015**.
77. Driver, C.C.; Oud, J.H.L.; Voelkle, M.C. Continuous Time Structural Equation Modeling with R Package ctsem. *Journal of Statistical Software* **2017**, *77*, 1–35.
78. Bliese, P.D.; Adler, A.B.; Flynn, P.J. Transition processes: a review and synthesis integrating methods and theory. *Annual Review of Organizational Psychology and Organizational Behavior* **2017**, *4*, 263–286.
79. Koopmann, J.; Lanaj, K.; Bono, J.; Campana, K. Daily shifts in regulatory focus: The influence of work events and implications for employee well-being. *J. Organiz. Behav.* **2016**, *37*, 1293–1316.