# Fatigue in the Workplace: How Negative Work Events affect Employee Well-being, and the Moderating Role of Positive Work Events

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#### Abstract

Existing research suggests a relationship between negative work events and fatigue. End-ofworkday fatigue is identified as a potential risk factor that contributes to worse overall wellbeing and diminished productivity. This study investigates how negative work events affect fatigue, utilizing a holistic approach that considers a variety of negative work events. Additionally, the study explores the moderation effect of positive work events on the relationship between negative work events and fatigue. Positive work events have not been researched to the extent that negative work events have, however, literature suggests that positive work events may be able to help people recover more quickly from experiencing negative events. The relationship of the three study variables was investigated, keeping in mind the principles of Hobfoll's Conservation of Resources (COR) theory (1989) and Fredrickson and Levenson's (1998) undoing effect. The study utilized a 10-day diary study design, with a sample of 96 participants. The results show that while negative work events lead to higher fatigue levels, positive work events do not create a significant buffer which reduces the effect. The study adds to the literature by engaging an extensive taxonomy of work events, and further adds valuable research exploring the impact of positive work events.

Keywords: fatigue, negative work events, positive work events

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Mental health is a major public health problem, and while work can contribute to positive mental health, negative workplace conditions can have an adverse effect and pose a risk to employee mental health (WHO, 2022c). According to the World Health Organization (WHO), the concept of mental health is "a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community" (WHO, 2022b). The WHO further suggests that in 2019, within the population of working-age adults, an estimated 15% were suffering from a mental disorder (WHO, 2022c).

The present study investigates a specific part of the work environment, namely negative and positive work events, and how they affect fatigue in employees. Frone and Tidwell (2015) identify work fatigue as a contributing factor to both personal and organizational outcomes. They suggest that work fatigue cannot only affect performance and turnover rates but can also influence both physical, as well as mental health. Gaining more knowledge about these mechanisms will hopefully allow me to determine not only how employees experience work events, but especially how these experiences are then expressed in terms of fatigue levels.

Negative work events can have detrimental effects on the well-being of employees, sometimes even going as far as posing serious health risks and affecting mental health and wellbeing negatively in the long term (Kelloway et al., 2023). The main focus of this paper is to build upon existing research investigating this issue. Additionally, I will expand and research the possible moderating effects of positive work events on the relationship between negative work events and fatigue.

Following the Conservation of Resources (COR) theory (Hobfoll, 1989), which posits that humans must conserve resources such as social bonds and personal achievements, positive work events could function as positive reinforcement, thereby strengthening the abovementioned resources. Applying COR theory (Hobfoll et al., 2018) to the workplace and the relationship between negative work events and fatigue, it could suggest that experiencing positive work events may moderate the negative effects of negative work events on fatigue and serve as a kind of buffer (Gross et al., 2011; Kuba & Scheibe, 2017).

This paper aims to take a more holistic perspective on work events by examining a large variety of events that can occur in the daily workplace. It additionally focuses on investigating the complex issue of positive work events and how they affect the relationship between negative work events and fatigue, a field where limited research has been done (Liu et al., 2023).

#### **Negative Work Events and Fatigue at Work**

There are various definitions for "events" by different researchers, and while substantial agreement exists among many of these definitions, it is still important to define "events" early on in this paper to prevent any confusion about the term. According to Weiss and Cropanzano (1996), affective events are "things that happen to people in work settings" and that people "react emotionally to" (p. 11). Morgeson et al. (2015) further add that essentially, everything that happens in life can be identified as an event, and our memories and experiences are made up of a string of events. Especially this last part is important to keep in mind. When speaking of events in this paper, I do not mean extraordinary events (e.g., a terror attack, a natural disaster, or winning the lottery) that fall out of the threshold of everyday experiences. This is not to say that even events that may be classified as comparatively less distressing do not cause an (emotional) reaction. Even those less taxing events can affect the person who experiences them in some

form. For this research, I investigate the effects of both negative and positive work events, meaning that they are events that are experienced in the work settings, and by nature are either inherently more negative or positive. For this, the taxonomy developed by Schmitt and Scheibe (2022) is employed. Affective work events can be differentiated into different types of events, e.g. social-self, social-others, personal, or task-related events. For this research, all affective events will be considered as a whole, and it is merely the valence, so whether they are negative or positive, and the extent to which they affect people that will be examined.

According to Ohly and Schmitt (2015), negative work events are events that hinder goal attainment, events that pose obstacles in the process of completing tasks, and a general overload. Morgeson et al. (2015) further add that negative events diverge from routine, thereby causing a disruption of some sort. The size of the disruption is however not identified and since every person differs in how strongly they experience things and what is more or less disruptive to them, this is also subjective.

The effects of negative work events have been studied from many different angles and research has shown that experiencing such events at work can have negative effects that present themselves in differing ways. For example, Schmitt and Weigelt (2023) found that experiencing negative work events affects the ability to accomplish goals and overall self-efficacy, which in turn can lead to a lower self-confidence level concerning one's ability to succeed at work. Beal et al. (2005) propose that negative affect can lead to employees having to invest time and energy into regulating their emotions, thereby taking away resources (in this case time and emotional processing resources) which are needed to keep them focused on actual tasks and continue their work. Lastly, Kuba and Scheibe (2017) state that at the end of the workday, employees can feel unsettled as a result of experiencing several negative events, affecting their well-being.

Dimoff and Kelloway (2018) identified several consequences of mental health issues that lead to diminished performance. One of these consequences is fatigue. There are varying definitions that are used to identify the rather broad concept of fatigue, but according to Frone and Tidwell (2015), they all focus on two main aspects: a state of tiredness and a reduction in capacity. Combining the different factors and focal points into one definition, Frone and Tidwell (2015) define work fatigue as "extreme tiredness and reduced functional capacity that is experienced during and at the end of the workday" (p. 274). They further add that there are different subtypes of fatigue, namely physical work fatigue, mental work fatigue, and emotional work fatigue, all representing a depletion of a different resource.

To explain this depletion of resources and put it into context, Hobfoll's COR theory (1989) is utilized. This theory in connection with recent research findings offers a valuable background for the principles of fatigue levels as an effect of experiencing negative work events. COR theory lays out certain principles of resource loss which can lead to strain. Firstly, it is important to identify what resources are. According to Hobfoll and colleagues, resources are very broad and include anything from objects, to condition resources (e.g. employment), personal resources, and energy resources. In this study, the resources in question are personal and energy resources since both can be affected negatively as well as positively by the experience of negative and positive work events. A loss of these resources can lead to an experience of stress and strain, and there are several theoretical frameworks (Bakker & Demerouti, 2007; Hobfoll, 1989; Hobfoll et al, 2018; Shirom, 2011) that collectively find a connection between experiencing (work related) stress and increased levels of fatigue.

In addition, according to Fikretoglu et al. (2017), mental health should be seen as a spectrum ranging from ill to healthy, and Kelloway et al. (2023) use the term "mental

healthiness" (p. 364) to describe the healthy end of this spectrum. Mental healthiness is characterized by an ability to cope with the everyday stress of life, meaning that a healthy person is capable of adapting to situations that cause stress in some form, they are able to be productive and can realize their own abilities (WHO, 2022b). This in return suggests that a lack of the ability to cope and deal with arising stressors could lead to mental health issues in the long run. While external factors and inherent coping abilities of a person certainly play a role when it comes to how they deal with stress, the limited capacity to do work, that, as Pillsbury (1922) suggests is caused precisely by doing work is something important to investigate. Work-related fatigue, which is primarily caused by work itself, could pose negative risks for employees and a reduction of this type of fatigue is therefore crucial.

Frone and Tidwell (2015) propose that fatigue represents a decrease in motivation as well as a decrease in capacity. Especially the latter, a decrease in capacity, is important to keep in mind for the present research. Following the principles of COR theory (Hobfoll, 1989), depletion of resources and decreased capacity to deal with (emotional) stress could manifest as higher fatigue levels. Based on the aforementioned principles of resource depletion and existing research I expect that experiencing negative work events leads to higher levels of fatigue.

Hypothesis 1. Experiencing negative events at work is positively related to work fatigue.Positive Work Events and Fatigue at Work

Adding upon the positive relationship between negative work events and fatigue, I inspect a possible moderating effect of positive work events. Contrary to negative work events, positive work events are characterized as furthering goal attainment, success with tasks, and successful problem-solving (Ohly & Schmitt, 2015). Existing research proposes that experiencing both negative as well as positive events may lead to a buffering effect, whereby the

negative effects of experiencing negative events, e.g. fatigue, may be experienced less strongly (Gross et al., 2011; Kuba & Scheibe, 2017). Fredrickson and Levenson (1998) propose the socalled "undoing effect". Their theory proposes that negative events can put the autonomic nervous system (ANS) into a certain state of alertness, which might be accompanied by negative emotions. When experiencing positive events, it is a possibility that those create positive emotions which then could "loosen the hold that these negative emotions gain on an individual's mind and body by dismantling or *undoing* this psychological and physical preparation for specific action" (Fredrickson and Levenson, 1998, p. 193). Folkman and Moskowitz (2000) further propose that the experience of positive events may even help gain energetic resources, a principle that is also characterized in COR theory (Hobfoll, 1989) as a means to help alleviate some of the stress that is experienced by resource loss.

In contrast, Gross et al. (2011) characterized several ways in which positive work events can not only help with resource gain but also ways in which they can further deplete resources. Although the experience of a positive work event may not be negative on an emotional level, Gross and colleagues state that it still requires attention and (emotional) processing of the event. While the experience of positive events may strengthen resources in the long run, having to deal with the emotions could have draining short-term effects which may be reflected in higher fatigue levels at the end of the workday. Gross and colleagues conclude that since there are few studies investigating the effects of positive work events on fatigue, it is difficult to say whether they have more of a depleting than gaining effect regarding resources.

Based on the existing research, but especially following the principles of COR theory (Hobfoll, 1989), and the undoing effect (Fredrickson & Levenson, 1998), I expect that positive events have a positive effect. By this, I mean that the positive emotions that can stem from

experiencing a positive event can create a buffer, which can lessen the negative effects of negative work events on fatigue by on the one hand building up energetic resources quicker, and on the other hand help with loosening the negative emotions. I expect to find that when both negative and positive work events are experienced, the level of fatigue is lower than when one only experiences negative work events. The second hypothesis therefore is:

**Hypothesis 2.** Positive work events function as a buffer and reduce the negative impact on fatigue caused by experiencing negative work events, thereby leading to a lower level of fatigue.

#### Method

#### **Participants and Data Collection**

The sample consisted of 96 participants, all above the age of 18, with a sufficient level of English and working at least 20 hours per week. The participants came from diverse backgrounds, with 54.2% coming from the Netherlands, 16.7% from Germany, 10.4% from Romania, and 18.8% from other countries. They held jobs in varying fields (e.g., teacher, nurse, consultant, engineer, and HR business partner), with a majority of 60.4% holding a University degree. The majority of participants (n = 67) worked 35 to 40 or more than 40 hours per week. The mean age of the sample was 35.76 years, ranging from 19 to 62 years. Within the sample, 60 participants identified as female, 35 as male, and one as "otherwise defined, undefined, or preferred not to say".

The participants were recruited by Bachelor's and Master's students from the University of Groningen using social media (e.g., LinkedIn, WhatsApp) and through personal invitation. They were first asked to fill in a baseline survey, gathering demographic information. Afterward, each participant that had consented to participate in the diary study received daily surveys for a

duration of 10 days, which they were asked to fill in after having finished work. The participants were recruited at two separate time points. Once in June 2022 and once in March 2023, with 54 and 42 participants respectively. The data of a participant was only considered if they had filled in the baseline and at least two of the ten daily diary surveys. Since the daily diary study questions were the same, the data across the ten surveys was combined, resulting in a total of 553 observations. As a reward, participants were able to take part in a raffle where they had the chance to win 3 x 50 euros. Approval from the ethics committee of the Faculty of Behavioral and Social Sciences of the University of Groningen to run the study was granted.

#### Measures

The entire study included a large variety of variables in order to allow for several models including differing variables to be tested. However, not all variables were relevant to the chosen model of the individual researchers, meaning that although they were measured, they were not necessarily taken into account in any further analysis. In the daily survey, participants answered questions surrounding both positive and negative work events they had experienced during the day, as well as emotions, fatigue levels, self-esteem, daily goal attainment, work engagement, and psychosomatic complaints. For the present study, the variables that were considered in the analysis and a description of how they were measured are listed below.

#### Negative Work Events

Utilizing the 32-item taxonomy of work events, developed by Schmitt and Scheibe (2022) participants were asked to indicate whether they had experienced a specific event, and if they had, indicate how significantly it affected them. This was measured on a 5-point Likert scale from 1 (*did not experience this situation; no impact*) to 5 (*situation experienced; very significant impact*). In the analysis, the variables of each work event were recoded and the first

option was removed since not experiencing a certain event also meant that there was no impact, therefore creating a 4-point Likert scale, indicating only how impactful the event was. Negative work events that participants were asked about ranged in severity and included events such as the following: *You were unsuccessful with accomplishing or progressing with a work goal, project or task; You have faced a conflict or ambiguity about a work task or process at work; You were humiliated, treated disrespectfully or rudely by a supervisor; You have experienced sexual harassment or sexism at work.* In total, there were 19 negative work events that were presented.

### Positive Work Events

I also utilized the 32-item taxonomy of work events to measure positive work events. A total of 13 statements, such as *You have accomplished something or made progress on a work goal, project or task; You had the opportunity to learn something new or to improve a skill; You have successfully exercised influence over others or decisions;* and *You have experienced a positive non-work related event at work* were asked. The participants responded on the same 5-point Likert scale, ranging from 1 (*did not experience this situation; no impact*) to 5 (*situation experienced; very significant impact*). Same as with the negative work events, the variables were recoded into a 4-point Likert scale, indicating how impactful the experience of each event was.

## Fatigue

Fatigue was measured with three items, adapted from Frone and Tidwell's (2015) work fatigue inventory. Participants were asked to indicate on a 5-point Likert scale from 1 (*not at all*) to 5 (*extremely*) whether at the end of the workday, they felt mentally exhausted, had difficulty thinking and concentrating, or felt mentally worn out. Cronbach's alpha for the fatigue scale is 0.914.

#### **Control Variables**

Based on existing literature exploring the relationship between negative work events and fatigue with positive work events as a potential moderator, no evident control variables were identifiable which is why an exploratory analysis of the demographic variables as potential control variables was conducted. This analysis did not show any significant correlations between demographic variables and the study variables, and no control variables were therefore considered in the further analysis.

#### **Data Analysis**

The data from the daily diary surveys was combined, and results were aggregated to the person level. In preparation for the multiple linear regression analysis, the reliability of the variable scales was measured. The scale for fatigue was reliable with  $\alpha = 0.914$ . For both negative and positive work events, it cannot be assumed that events are homogenous, meaning that they are not necessarily highly correlated and the occurrence of one event makes another event more or less likely to also occur. It is therefore not necessary to check either of the two scales for internal reliability and further analysis can be conducted without concerns. Following the reliability analysis, scale means were conducted for all three variables.

To explore if there were any differences in the core variables depending on the year in which the participants followed the study, t-tests were conducted. After testing the mean differences in the demographic variables for the participants from 2022 and 2023, the subsamples did not show any significant differences in age (t (93) = 0.384), p = 0.702), and gender (t (94) = 0.896, p = 0.387). With regards to the study variables, the t-test also did not show any significant differences for negative work events (t (91) = -1.434, p = 0.155), fatigue (t (94) = -0.887, p = 0.377), or positive work events (t (94) = 1.150, p = 0.253) between the participants from 2022 and the participants from 2023.

As preparation for the regression analysis, the data was checked for linearity, multicollinearity, homoscedasticity, normal distribution of data, and outliers. Finally, data was analyzed employing linear multiple regression to test the relationship between negative work events and fatigue, with positive work events as a moderator.

#### Results

To conduct the statistical data analysis SPSS version 28 was used. The means and standard deviations as well as the correlations of all study variables are shown in Table 1. Table 2 presents the results of the multiple linear regression.

Subsequently, the correlation analysis was performed. Firstly, with all demographic variables and the study variables to identify any possible control variables. This did not lead to any meaningful results as none of the variables showed to be significantly correlated with the independent or dependent variables. The only significant correlation that was found was a main effect between negative work events and fatigue (r(91) = 0.321, p = 0.002).

Following the reliability analysis and the calculation of scale means for the three study variables (negative work events, fatigue, and positive work events), assumption checks were performed and there was no sign that the data was not normally distributed (see Figure A1 and A3), that there were outliers, multicollinearity (see table 1), homoscedasticity (see Figure A2), or linearity issues (see Figure A2).

As the last step, a multiple linear regression analysis was performed to test the hypotheses. For this, the independent variables were first centered and the interaction term between negative work events and positive work events was calculated. In the multiple linear regression, the independent variables were added stepwise to create two models, one that only takes into consideration negative work events and one that considers both negative and positive

work events, as well as their interaction term. Regarding Hypothesis 1, which stated that negative work events are positively related to fatigue, significant results were found (B = 0.539, SE = 0.178, t = 3.036, p = 0.003,  $R^2 = 0.103$ ), see Table 2. Hypothesis 1 can be supported. Hypothesis 2 states that experiencing positive work events creates a buffer and reduces the negative impact of negative work events on fatigue. No significant results were found (B =0.441, SE = 0.362, t = 1.217, p = 0.227,  $R^2 = 0.118$ ) and hypothesis 2, therefore, cannot be supported.

### Discussion

#### **Summary of Research Findings**

Researchers have proposed that fatigue and mental strain may be contributing to mental health issues (Dimoff and Kelloway, 2018; Kelloway, 2023), and so it is of vital importance to research how events in the workplace affect employees to come up with strategies and policies that could perhaps counteract some of the negative effects. The goals of the present research were first to study the effects of negative work events on fatigue in a more holistic way by employing an extensive taxonomy, and secondly to gain a deeper understanding of how positive work events affect the relationship between negative work events and fatigue. The results of this study showed firstly that there is a relationship between negative work events and fatigue. These findings are in line with existing research in this field (Dimoff & Kelloway, 2018; Frone & Tidwell, 2015; Kelloway et al., 2023), and support the assumption that experiencing negative events at work positively predicts end-of-workday fatigue.

Due to a lack of research concerning positive work events (Liu et al., 2023) it is still not entirely clear how they can perhaps function as a buffer or enable people to recover from experiencing negative events more quickly. With an apparent trend of mental health issues being

on the rise (WHO, 2022), the question arises as to how far the workplace and working conditions may play a role in negatively affecting employees. The second hypothesis stated that experiencing positive work events could create a buffer and lower the negative impact that negative work events have on fatigue, thereby resulting in lower fatigue levels. The results of the present study do not support this hypothesis which implies that positive work events do not significantly affect the relationship between negative work events and fatigue.

#### **Theoretical Implications**

Based on existing research in connection with the principles of COR theory (Hobfoll, 1989), I hypothesized that negative work events affect fatigue positively, or in other words, experiencing a higher number of negative events leads to higher levels of fatigue. It needs to be noted here that not only the number of negative work events plays a role, but especially how much they impact a person. The results of the present study replicate existing findings and, in line with COR theory (Hobfoll, 1989), suggest that experiencing negative work events that affect a person to some extent (emotionally or energetically) can lead to a loss of resources which is then reflected as heightened fatigue levels.

Concerning the second hypothesis, although no significant results were found, the theoretical implications are important nonetheless. By testing the hypothesis of this study, more research investigating a potential buffering effect was added. Although no moderation effect of positive work events on the relationship between negative work events and fatigue was found, this may be due to limitations as a result of the study design, sample, and duration of the research, and less due to the complete absence of the proposed buffering and resource gain mechanisms. One argument which could help explain the non-significant moderation effect in this study is the fact that the mean score for fatigue did not take into account the differing

amounts of negative work events that participants experienced during a work day, but more so the average extent to which they were affected by negative work events. In a study conducted by Gross et al. (2011), it was found that positive work events did have a moderating effect on the relationship between negative work events and fatigue on days where many negative work events were experienced, but not on days where fewer negative work events were experienced. Furthermore, individual differences were not taken into consideration. Since a 4-point Likert scale was used to measure how much a specific event had affected the participant, there are natural variances depending on the subjective evaluation of each individual participant, and it may also be possible that a 4-point Likert scale does not capture the fine nuances between different levels of affect sufficiently.

With regards to the theoretical implications, it may of course be the case that there simply is no statistically significant moderating effect of positive work events, however, what seems more likely is that the theoretical approach that was used in this study to formulate the hypothesis and research model does not fully capture the complexity of this relationship. Since there is existing research (Gross et al., 2011) which, utilizing a more refined theoretical approach, and COR theory (Hobfoll, 1989) which supports the hypothesis that resource depletion through negative work events could be counteracted or buffered by research gain through positive work events, a logical conclusion is that the theory needs to be adapted and further tested.

### **Practical Implications**

With regard to the practical implications, the results draw attention to the importance of employee well-being and the creation of positive workplace conditions. Based on the results of this study, it can be assumed that if more impactful negative work events lead to higher fatigue,

then experiencing less impactful negative work events leads to lower fatigue levels. Keeping in mind COR theory (Hobfoll, 1989), this suggests that the fewer energy resources are lost that would have to be invested into coping with a negative event, the better the end-of-workday fatigue levels and subsequently well-being of employees. In practice what this means is that companies could help not just with strengthening the individual well-being of their employees but also their ability to concentrate on work and be as productive as possible. This can be done by actively counteracting the occurrence of negative work events, or at least attempting not to contribute more negative events. It must be noted that some of the negative work events that were included in the taxonomy used in this study, such as experiencing acute physical or mental health issues or being treated disrespectfully by customers, clients, or patients are not necessarily under the influence of the company or supervisors, however, the majority of events that were measured can be influenced by the employer. Creating a better company culture that benefits the employee well-being by for example implementing a kinder feedback structure, strict rules on how supervisors can address and interact with employees, and protective measures when it comes to negative events caused by clients are therefore of the utmost importance.

#### **Strengths, Limitations, and Future Research Implications**

While the results of the study need to be interpreted with certain limitations in mind, it is also important to highlight some of its strengths. The present study uses the most extensive taxonomy of work events of any research that has been done in the field, thereby offering a much more holistic view of the variety of events that employees experience and deal with in the workplace on a daily basis.

There are, however, a few methodological limitations. The sampling of the participants was not random since they were primarily invited to participate by personal invite of the

researchers. This resulted in a highly educated sample, with 60.4% holding a University degree. It is plausible that due to the standard of education and the assumption that people that are more educated, our sample holds higher-ranking jobs than the broad population of employees. Due to the company culture and assumedly better working conditions in those jobs, they may be subject to less negative work events, not just in terms of numbers but also in terms of affect level.

Furthermore, one can assume, due to interpersonal differences, that a negative work event does not necessarily affect every person to the same extent, and depending on other factors, such as personal predisposition, sensitivity to certain events, or even day-to-day differences, it can change how much a specific event will affect a person. Based on this in connection with the restrictiveness of a 4-point Likert scale in terms of the nuanced assessment of how much a certain event affected a participant, I would suggest that the measures, especially the scales that are used to evaluate experiences can be extended further to be as accurate as possible.

Another limitation is the relatively small sample size. Although the study was conducted in two waves, it was not possible to generate a larger sample than 96 participants with 553 observations. This potentially affected the statistical power, making it more difficult to generalize findings from the sample to the population. In this study, I combined the scores for all negative work events and positive work events that were experienced per participant to create a mean score, which indicates on average how much a person was affected by negative and positive work events as a whole. It is therefore possible that certain effects, such as the buffer created by positive work events, were present for a few participants, but since the within-person relationship was not examined in this study, no statistically significant effects were found.

Lastly, and tying into the limitation above, the time span for which the study was conducted was relatively short. It may be that especially the buffering or undoing effect

(Fredrickson & Levenson, 1998; Fredrickson et al., 2000) of positive work events only establishes itself after a longer period. Since all observations were combined, I was also not able to compare participants who filled in the study for a longer period of time (e.g., 10 days) in comparison to participants that only filled in the daily survey twice.

For future research, I would recommend conducting a more extensive longitudinal study. This does not only concern the number of days that the participants' well-being should be monitored and assessed but also the sample size and diversity of the sample. By researching a sample that comes from different academic backgrounds and holds a variety of jobs, the findings would be more impactful for the general population of employees. Additionally, I believe that adding more measures to assess baseline mental health issues or a certain predisposition to experience stress and fatigue more strongly, and then looking at the individual differences between participants rather than aggregating the data to the person level would lead to interesting findings, and hopefully give even more insight into the field of affective work events and fatigue.

### Conclusion

The present study has shown that there is a correlation between negative work events and fatigue, and while the same cannot be said about the moderating effect of positive work events, it remains a topic that is of vital importance. Establishing that employees are affected by fatigue, and especially keeping in mind COR theory (Hobfoll, 1989), it is crucial to invest more time into researching ways in which the negative effect can be diminished, enabling employees to succeed in the workplace, and removing risk factors for mental health issues that are caused or influenced by the experience of negative work events.

#### References

- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. Journal of Managerial Psychology, 22(3), 309–328. https://doi.org/10.1108/02683940710733115
- Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. (2005). An episodic process model of affective influences on performance. *The Journal of Applied Psychology*, 90(6), 1054–68. https://doi.org/doi:10.1037/0021-9010.90.6
- Dimoff, J. K., & Kelloway, E. K. (2018). Signs of struggle (SOS): The development and validation of a behavioural mental health checklist for the workplace. *Work & Stress*, 33(3), 295–313. <u>https://doi.org/10.1080/02678373.2018.1503359</u>
- Fikretoglu, D., D'Agata, M. T., Sullivan-Kwantes, W., Richards, K., & Bailey, L. S. (2017).
  Mental health and mental health service use attitudes among Canadian Armed Forces
  (CAF) recruits and officer cadets. DRDCRDDC-2017-R027. Toronto, ON: Defence
  Research and Development Canada (DRDC).
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist*, 55(6), 647–654. https://doi.org/10.1037/0003-066x.55.6.647
- Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the Cardiovascular Sequelae of Negative Emotions. *Cognition & Emotion*, 12(2), 191–220. https://doi.org/10.1080/026999398379718
- Fredrickson, B. L., Mancuso, R., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion*, 24(4), 237–258. https://doi.org/10.1023/a:1010796329158

Frone, M. R., & Tidwell, M. O. (2015). The meaning and measurement of work fatigue:

Development and evaluation of the Three-Dimensional Work Fatigue Inventory (3D WFI). *Journal of Occupational Health Psychology*, 20(3), 273–288. https://doi.org/10.1037/a0038700

Gross, S., Semmer, N. K., Meier, L. L., Kälin, W., Jacobshagen, N., & Tschan, F. (2011). The effect of positive events at work on after-work fatigue: They matter most in face of adversity. *Journal of Applied Psychology*, 96(3), 654–664.

https://doi.org/10.1037/a0022992

- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. https://doi.org/10.1037/0003-066x.44.3.513
- Hobfoll, S. E., Halbesleben, J. R. B., Neveu, J., & Westman, M. (2018). Conservation of Resources in the Organizational Context: The Reality of Resources and Their Consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640
- Kelloway, E. K., Dimoff, J. K., & Gilbert, S. (2023). Mental health in the workplace. Annual Review of Organizational Psychology and Organizational Behavior, 10(1), 363–387. <u>https://doi.org/10.1146/annurev-orgpsych-120920-050527</u>
- Kuba, K., & Scheibe, S. (2017). Let it be and keep on going! Acceptance and daily occupational well-being in relation to negative work events. *Journal of Occupational Health Psychology*, 22(1), 59–70. https://doi.org/10.1037/a0040149
- Liu, D., Morgeson, F. P., Zhu, J., & Fan, X. (2023). Event-Oriented Organizational Behavior Research: A Multilevel Review and Agenda for Future Research. Journal of Management, 49(6), 2148–2186. https://doi.org/10.1177/01492063231162094

Morgeson, F.P, Mitchell, T.R., & Liu, D., (2015). Event system theory: an event-oriented

approach to the organizational sciences. *The Academy of Management Review*, 40(4), 515–537. https://doi.org/10.5465/amr.2012.0099

- Ohly, S., & Schmitt, A. (2015). 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*, *30*(1), 15–35.
   <u>https://doi.org/10.1007/s10869-013-9328-3</u>
- Pillsbury, W. B. (1922). The fundamentals of psychology (rev. ed.). New York, NY: MacMillian.
- Schmitt, A. & Scheibe, S. (2022). Development of a cross-cultural taxonomy on the frequency and impact of affective work events. Presentation at the 15th Congress of European Academy of Occupational Health Psychology, Bordeaux, France.
- Schmitt, A., & Weigelt, O. (2023). Negative work events impede daily self-efficacy through decreased goal attainment: Are action orientation and job autonomy moderators of the indirect effect? *European Journal of Work and Organizational Psychology*, 1–14. https://doi.org/10.1080/1359432x.2023.2166832
- Shirom, A. (2011). Job-related burnout: A review of major research foci and challenges. In J. C.
  Quick & L. E. Tetrick (Eds.), Handbook of occupational health psychology (2nd ed., pp. 223–241). Washington, DC: American Psychological Association.

Weigelt, O., Schmitt, A., Syrek, C. J., & Ohly, S. (2021). Exploring the Engaged Worker over Time—A Week-Level Study of How Positive and Negative Work Events Affect Work Engagement. *International Journal of Environmental Research and Public Health*, 18(13), 6699. <u>https://doi.org/10.3390/ijerph18136699</u>

Weiss, H.M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the

structure, cause and consequences of affective experiences at work. In B.M. Staw & L.L. Cummings (Eds.), *Research in organizational behavior* (Vol. 18, pp. 1-74). JAI Press.

World Health Organization: WHO. (2022). COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide. *World Health Organization*.
 <u>https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in</u>

Prevalence-of-anxiety-and-depression-worldwide

World Health Organization: WHO. (2022b). Mental health. www.who.int.

https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our response

World Health Organization: WHO. (2022c). Mental health at work. <u>www.who.int</u>. https://www.who.int/news-room/fact-sheets/detail/mental-health-at-work

# Table 1

Means, Standard Deviations, and Correlations among Study Variables

ariable	M	SD	1.	2.		
1. Fatigue	2.162	0.84				
2. Negative work events	1.697	0.50	.321 (0.002)**			
3. Positive work events	2.104	0.49	.123 (0.232)	.349 (<0.001)**		

*Note.* N = 96, except for Negative work events (N = 93)

\*\*. Correlation is significant at the 0.01 level (2-tailed).

# Table 2

# Results of multiple linear regression

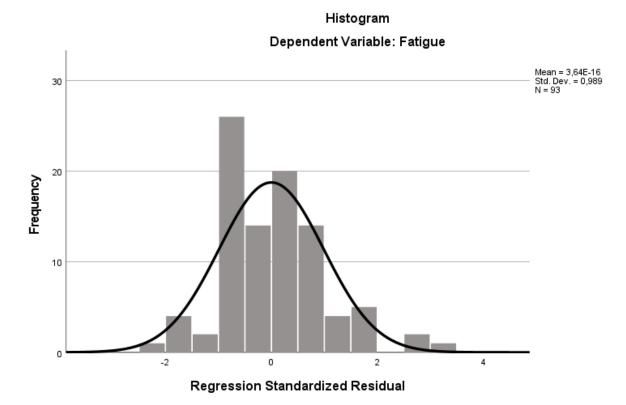
_	<i>Coefficients</i> <sup>a</sup>											
			lardized	Standardized		-					Collinea	•
	Coefficients		Coefficients				Correlations			Statistics		
			Std.				R	Zero-				
Mo	del	В	Error	Beta	t	Sig.	Square	order	Partial	Part	Tolerance	VIF
1	(Constant)	2.165	.084		25.93	<.001	.103					
	Negative work events	.539	.178	.323	3.04	.003		.321	.305	.303	.878	1.139
	Positive work events	013	.182	008	072	.943		.105	008	007	.878	1.139
2	(Constant)	2.128	.089		23.94	<.001	.118					
	Negative work events	.464	.188	.278	2.47	.015		.321	.253	.246	.782	1.279
	Positive work events	.022	.184	.013	.121	.904		.105	.013	.012	.856	1.168
	Interaction term (pos x neg work events)	.441	.362	.129	1.22	.227		.211	.128	.121	.889	1.125

a. Dependent Variable: Fatigue

## Appendix

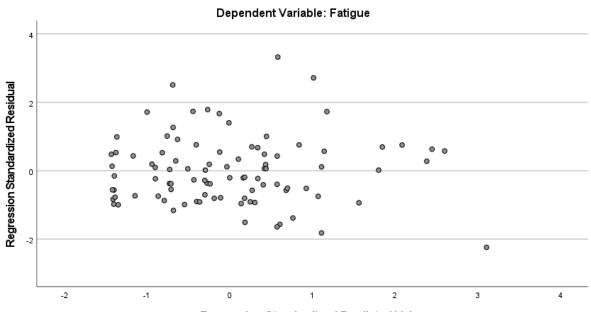
# Figure 1

## Histogram Assumption Check Normal Distribution



## Figure 2

Scatterplot Assumption Check Homoscedasticity



Scatterplot

**Regression Standardized Predicted Value** 

## Figure 3

P-P plot Assumption Check Normality

