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Linking Work Events with Work Engagement: Mediating Role of Emotions and Moderating Role of Psychological Capital

Abstract: We examined the role of work-related emotions and personal resources operationalised as psychological capital (PsyCap) in the relationship between events occurring at work and employees' work engagement. Using affective events theory and broaden-and-build theory as theoretical frameworks, we theorise that the perceived frequency of positive and negative events at work and work engagement is mediated by positive and negative work-related emotions and moderated by PsyCap. The results of path analysis on a sample of US and Polish employees showed that PsyCap moderated the relationship between the perceived frequency of negative work events and negative work-related emotions, however, we also found culture-specific effects of PsyCap. Our study contributes to the human resource development (HRD) literature by providing evidence of the role of personal resources in the event–emotion–engagement process in the workplace. Also, our findings deepen the understanding of HR developers in multinational organisations and provide suggestions on how they can implement PsyCap trainings based on culture-specific work environment.

Keywords: *work engagement, psychological capital, work events, work-related emotions, affective events theory, broaden-and-build theory*

INTRODUCTION

Work engagement is associated with commitment, enthusiasm, absorption and significant effort (Schaufeli, 2012). Engaged employees are highly energetic, feel strong job identification and work harder, which might impact organisational business outcomes (Harter et al., 2010). Indeed, work engagement is positively related to job performance (Corbeanu & Iliescu, 2023), client satisfaction (Salanova et al., 2005), and objective financial returns (Xanthopoulou et al., 2009). Hence, not surprisingly, the concept of employees' work engagement has attracted extensive interest among academics and practitioners (Bakker & Albrecht, 2018). However, although researchers have provided ample evidence of the positive consequences of work engagement, its psychological underpinnings and relationship to events at work have not been sufficiently explored. Since work engagement is defined as a dynamic process that depends on situations that employees

encounter at work (Bakker & Bal, 2010; Bledow et al., 2011), the impact of work experiences on work engagement appears to be of particular importance. We adopt this perspective and draw on affective events theory (AET; Weiss & Cropanzano, 1996) because it recognises the environment–emotion–behaviour chain and focuses on events that trigger emotional reactions and mood changes in employees, which in turn influence affect-driven behaviour in the workplace. Although Weiss and Cropanzano (1996) initially discussed the effects of affective experiences and their situational causes on job satisfaction, their theory has also been successfully applied to studies of work engagement (Bledow et al., 2011; Ouweneel et al., 2012).

As Saks and Gruman (2014) summarise, personal resources are assumed to be important and necessary for employees' professional engagement. They could help them cope more effectively with emotionally demanding work environments (Xanthopoulou et al., 2013) and predict their occupational well-being (Mäkikangas &



Kinnunen, 2003). While some studies have identified the effects of behavioural or motivational factors in the link between work events and occupational engagement (Demerouti & Cropanzano, 2017; Wang et al., 2020), to our knowledge, there are no studies that have examined the role of overarching core constructs that encompass multiple psychological skills that can be measured, developed and effectively managed to improve performance in today's workplace in terms of the relationship between work events and engagement.

Given the primary goal of human resource development (HRD), which is to improve individual and organisational performance by investing in employee growth and development (Werner & DeSimone, 2011), it is critical to examine the impact of higher-level personal resources, which can provide valuable insights into the dynamics of work engagement.

Thus, in this project, we propose that psychological resources, operationalised as psychological capital (PsyCap), may play a role in the relationship between workplace events, employees' emotional responses to those events, and workplace engagement. We chose to use this psychological concept because it can determine the way individuals respond to positive and negative workplace events, and because it is a developable skill that enhances experienced well-being (Luthans et al., 2008). Furthermore, PsyCap is negatively related to attitudes such as cynicism, turnover intentions, anxiety and work stress, and positively related to job satisfaction, psychological well-being and organisational commitment (Avey, Reichard, et al., 2011), and serves as an important determinant of workplace engagement (Alessandri et al., 2018). PsyCap thus appears to be an attractive construct that provides a substantial explanation of how employees behave at work and what can be done to enhance their work-related performance.

Our article contributes to the literature in several ways. First, we contribute to a better understanding of the event–emotion–engagement process by implementing AET (Weiss & Cropanzano, 1996) and extending this theorising using broaden-and-build theory (Fredrickson, 2001). Although the effects of events and emotions at work on behaviour have been investigated (Ohly & Schmitt, 2015; Weigelt et al., 2021), studies on the combined relationship between events at work, work-related emotions and engagement remain relatively fragmented and limited. This project aims to fill this research gap.

Second, we address the call for research to better understand positive psychology in human resource management (Gruman & Budworth, 2022). We examine the relationship between employees' organisational experiences and work engagement, including the psychological factors that an organisation can develop in employees. In our project, we employ the construct PsyCap, originating in positive organisational behaviour (POB), a field that is dedicated to exploring and understanding individuals' well-being, productivity and realisation of their maximum potential (Seligman et al., 2005).

Finally, as North Americans show higher levels of PsyCap compared to Poles (Wernsing, 2014), it seems

interesting to examine to what extent the effects of PsyCap are universal or culture-specific. Therefore, we examine the role of PsyCap in the relationship among work-related events, associated emotions and engagement at work from an international perspective by conducting the study with samples from both the United States and Poland. Many companies today conduct business and employ workers in an international space (World Atlas Global Issues, 2018). We anticipate that including this perspective in our research will provide valuable insights for HR developers to adapt internal organisational policies to the specific needs and characteristics of employees.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Work engagement in affective events theory

The most widely used definition of work engagement, proposed by Schaufeli and Bakker (2004), defines engagement as “a positive, fulfilling, work-related state of mind characterised by vigour, dedication, and absorption” (p. 295). Vigour refers to a high level of energy and motivation to invest effort in the work; dedication means being firmly involved in and enthusiastic about the work; and finally, absorption means focusing on the work and feeling that time is flying by. The work context in which employees are embedded affects their work engagement, as this can fluctuate depending on whether they encounter various positive or negative situations at work (Bakker & Bal, 2010; Bledow et al., 2011). Moreover, work events and affect at work are closely linked: what workers experience at work predicts changes in their affect (Ohly & Schmitt, 2015). Our current understanding of the relationship between work events, employees' resulting emotional reactions and subsequent social behaviour stems mainly from AET (Weiss & Cropanzano, 1996), which states that changes in circumstances at work can act as proximal stimuli for certain affective reactions and as distal causes of behaviours and attitudes towards work. For example, when employees are publicly criticised by their supervisor (negative event), they might feel anger or frustration (negative affective reaction), which can then lead to poor performance on the next task (decrease in work engagement). Indeed, Bledow et al. (2011) found that employees who reported negative events also reported lower levels of positive affect and work engagement. Furthermore, several studies have found that some positive events can affect both positive and negative emotions simultaneously, and some negative events can also affect both negative and positive emotions (Mignonac & Herrbach, 2004; Ohly & Schmitt, 2015). Based on the above considerations, we conclude that both positive and negative events are situational antecedents of affect and transfer their effects to engagement at work.

Broaden-and-Build Theory as Affective Pathway to Work Engagement

Although AET provides a useful and influential framework for explaining the effects of work events on emotions and affect-driven behaviours, the specific pathway

through which positive and negative work-related emotions influence work engagement remains incomplete in terms of its functional significance. We suggest that a more detailed examination of this psychological content can be conducted through broaden-and-build theory (BBT; Fredrickson, 2001). BBT assumes that positive and negative emotions play different roles in shaping people's repertoires of thought and action. According to BBT, positive emotions broaden individuals' views of their environment and encourage them to discover new ways of acting and thinking, which ultimately promotes their engagement at work (Fredrickson, 2001). Conversely, negative emotions narrow people's repertoire of thought and action, interrupting the ongoing flow of action and hindering engagement at work (Fredrickson & Joiner, 2002). Moreover, employees with positive emotions are more likely to experience proactive motivational states (Parker et al., 2010), to work towards challenging goals (Ilies & Judge, 2005) and to be engaged at work (Ouweneel et al., 2012). In contrast, people facing negative emotions often try to down-regulate their emotional responses (Gross, 2014), which consumes regulatory resources and can affect engagement at work. In addition, people experiencing negative affect tend to narrow and focus their attention significantly more, paying selective attention to negative information (Conway et al., 2013). As a result, negative affect hinders the ability to fully engage in an ongoing activity, feel energised at work and dedicate oneself to a task. Rooting our research in AET, according to which the evaluation of events triggers affective states and affect-driven behaviour (Weiss & Cropanzano, 1996), and BBT, in which the effects of positive affect expand and the effects of negative affect narrow (Fredrickson, 2001), we hypothesise the following:

H1. The relationship between the perceived frequency of positive events at work and work engagement will be mediated by work-related positive emotions (H1a) and negative emotions (H1b): a more frequent occurrence of positive events is associated with a higher level of employees' positive emotions and with a lower level of employees' negative emotions, which in turn are associated with higher work engagement.

H2. The relationship between the perceived frequency of negative events at work and work engagement will be mediated by work-related positive emotions (H2a) and negative emotions (H2b): a more frequent occurrence of negative events is associated with a lower level of employees' positive emotions and with a higher level of employees' negative emotions, which in turn are associated with lower work engagement.

Personal Resources and Their Importance in the Events–Emotions–Work Engagement Context

As stated earlier, we rely on affective events theory in this project because it provides a theoretical framework for how emotions can be an essential link between work events and employee work engagement. The second important contribution of AET is that it highlights the importance of individual dispositions that predispose employees to certain

affective responses to specific events. Initially, Weiss and Cropanzano (1996) explained that affective dispositions refer to stable personality traits, specifically positive and negative affectivity. For example, positive affectivity can serve as a resource that helps employees to cope with stressful events (Fredrickson et al., 2000). However, because it is a stable trait, positive affectivity cannot be developed and strengthened in employees to better cope with various work situations. Therefore, it is worth considering other personal resources capable of development.

Personal resources refer to individuals' resilience and their sense of ability to control and impact their environment, especially when the circumstances are challenging (Hobfoll et al., 2003). Previous studies have demonstrated that personal resources and work engagement are related (Xanthopoulou et al., 2009); however, the specific set of personal resources and their role in the relationship between environmental factors and work engagement has varied from study to study and remains under discussion. Hence, we concentrate on PsyCap as an interactive, synergistic resource that contributes to a more insightful understanding of the relationships among work events, employees' emotions and work engagement. Luthans et al. (2007) defined PsyCap as "an individual's positive psychological state of development characterised by: 1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks, 2) making a positive attribution (optimism) about succeeding now and in the future, 3) persevering toward goals, and when necessary, redirecting paths to goals (hope) to succeed, and 4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (p. 3).

As PsyCap is the "positive appraisal of circumstances and probability for success based on motivated effort and perseverance" (Luthans et al., 2007, p. 550), this personal resource may have the potential to stabilise the emotions felt in response to work events. Based on this perspective, we hypothesise that PsyCap could serve similar psychological functions as dispositional positive affectivity (Watson et al., 1988). High positive affectivity suggests that individuals have internal mechanisms of affect regulation that enable them to experience positive emotions regardless of external circumstances (Bowling et al., 2005). We hypothesise that individuals with a high PsyCap score will show a similar pattern, suggesting that they are less dependent on positive events, as PsyCap can compensate for a lack of positive events at work. Indeed, individuals with a high PsyCap score tend to experience positive emotions even during events that may be perceived as stressful by their colleagues (Avey et al., 2008). Furthermore, PsyCap is considered to be more stable than states such as emotions, but more flexible than personality traits such as core self-evaluations (Luthans et al., 2008) and could therefore be developed through targeted training interventions. This additional feature of PsyCap makes it even more worthwhile to study as it has potential evidence-based value for human resource development and performance management. Based on these findings, we hypothesise the following:

H3. PsyCap will moderate the relationship between the perceived frequency of positive work events (H3a), the perceived frequency of negative work events (H3b) and work engagement: the relationships will be stronger among individuals with low PsyCap and weaker among individuals with high PsyCap.

H4. PsyCap will moderate the relationship between the perceived frequency of positive work events (H4a), the perceived frequency of negative work events (H4b), and positive work-related emotions: the relationships will be stronger among individuals with low PsyCap and weaker among individuals with high PsyCap.

H5. PsyCap will moderate the relationship between the perceived frequency of positive work events (H5a), the perceived frequency of negative work events (H5b), and negative work-related emotions: the relationship will be stronger among individuals with low PsyCap and weaker among individuals with high PsyCap.

In summary, we consider PsyCap to be a buffer that helps employees cope with negative events, resulting in significantly fewer negative emotions being experienced without suppressing employees' positive emotions. Furthermore, we assume that when positive events occur, PsyCap acts as a bank of positive resources that makes engagement at work less dependent on the emotions

resulting from the work events. In Figure 1, we graphically represent our conceptual model, proposing the mediating role of positive and negative work-related emotions in the relationship between positive and negative work events and work engagement, and the moderating role of PsyCap in the relationship between work events, positive and negative emotions and work engagement. The hypotheses, data collection and analyses for the US sample were preregistered at https://aspredicted.org/4LT_4Q8.

METHOD

Participants

We recruited 748 participants (388 women, 354 men, 5 non-binary, 1 not stated; $M_{age} = 36.92$ years; $SD_{age} = 11.54$) employed in companies and administration units to participate in an online study. Our sample consisted of employees from Poland recruited via social media (e.g. LinkedIn, Facebook), as well as employees from the United States recruited via Prolific Academic. Most participants had completed either a bachelor's degree or a master's degree, and worked in IT and the administration sector, followed by sales and banking. Most of them were employed in large companies (over 300 employees). Regarding job positions, most participants were specialists, managers or office workers. The Polish sample was younger than the US

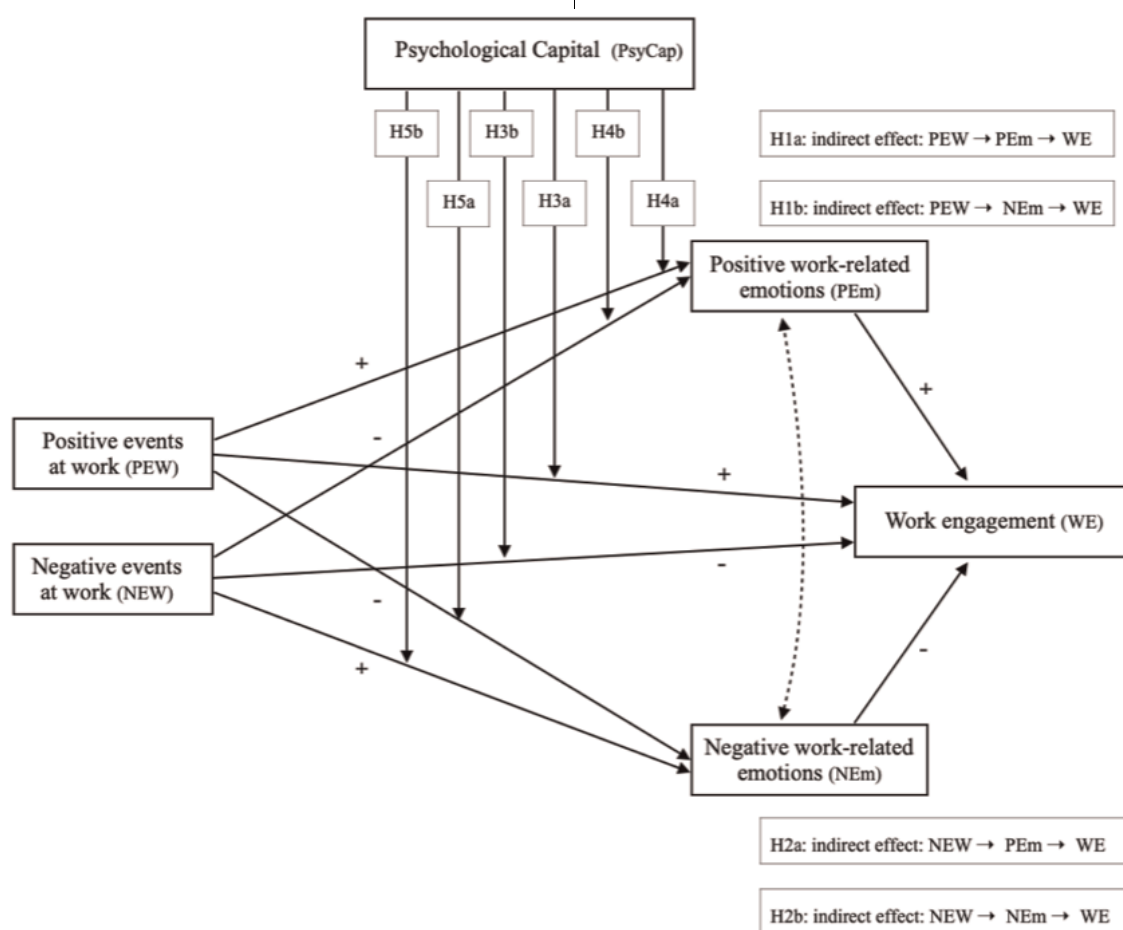


Figure 1. Model of the Relations Between Events at Work and Work Engagement: The Mediating Role of Work-Related Emotions and the Moderating Role of Psychological Capital

sample, included more women and more people with a university degree, but had shorter work experience (see Electronic Supplementary Materials, ESM, Table E1 for details).

Procedure

After giving informed consent, participants answered demographic questions on gender, age, educational level, employment status, type of job position, size of the company and employment industry. Participants who were unemployed or ran their own businesses were thanked at this point. Participants who declared they were employed were then directed to a further part of the study and filled in five questionnaires measuring work engagement, PsyCap, positive and negative work-related emotions, and the occurrence of positive and negative work events, presented in random order. No data were discarded after the completion of the study.

Perceived Frequency of Positive and Negative Events at Work

Participants were asked to evaluate how often they experienced each of 30 situations that might occur in their workplace using a scale from 0 = “never” to 6 = “every day”. For the Polish sample, the selection and wording of situations based on the event–emotion matrix (Basch & Fisher, 2000), was back-translated to Polish. Half of these events were positive (e.g. receiving praise from a supervisor or implementing a goal that was difficult to achieve), while the other half were negative (e.g. work overload or conflict with a colleague). Answers were averaged to compute a separate score for positive and negative events.

Positive and Negative Work-Related Emotions

We used the short version of the Positive and Negative Affect Scale (Watson et al., 1988) with modified instructions. The scale consists of 10 positive adjectives (e.g. interested, excited) and 10 negative adjectives (e.g. distressed, upset). Using a 5-point scale ranging from 1 = “very slightly” to 5 = “extremely strong”, participants indicated to what extent it reflected how they have felt during the past year in their work. The items were averaged to compute a total score separately for positive and negative work-related emotions.

Work Engagement

We employed a short version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli et al., 2006; with the Polish adaptation by Chirkowska-Smolak, 2012 for the Polish sample) consisting of nine items (e.g. “At my job, I feel bursting with energy” and “My work inspires me”). Participants answered using a 7-point frequency scale, ranging from 0 = “never” to 6 = “always/every day”. The items were averaged to compute a total score for work engagement.

Psychological Capital

We used the Psychological Capital Questionnaire (PCQ-12; Avey, Avolio et al., 2011), consisting of 12 items (e.g. “I feel confident in representing my work ideas in meetings with management”, “If I should find myself in a jam about my work, I think of many ways to get out of it”). Permission to use the PCQ for research purposes and the Polish version of the instrument was obtained from www.mindgarden.com. Participants answered using a 6-point Likert-type scale ranging from 1 = “strongly disagree” to 6 = “strongly agree”. The items were averaged to compute a total score for PsyCap.

RESULTS

The descriptive statistics, Cronbach’s α , and correlations between the variables are presented in Table 1. In the whole sample, the perceived frequency of positive work events positively and significantly correlated with the perceived frequency of negative work events. The correlation between the perceived frequency of positive events and positive work-related emotions showed a moderate and positive relationship, as did the correlation between the perceived frequency of negative events and negative work-related emotions. Positive and negative work-related emotions were negatively correlated. Both PsyCap and work engagement strongly and positively correlated with positive work-related emotions.

Common Method Variance

Since all data in this study were obtained from one source at one time, they might be subject to common method variance (CMV; Podsakoff et al., 2003), meaning that the

Table 1. Descriptive Statistics, Cronbach’s Alphas, and Correlations for Study Variables

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 | 5 |
|---|----------|-----------|----------|-------|-------|--------|--------|-------|
| 1. Perceived frequency of positive events at work | 2.87 | 0.96 | .87 | — | | | | |
| 2. Perceived frequency of negative events at work | 1.70 | 0.92 | .87 | .46** | — | | | |
| 3. Positive work-related emotions | 3.46 | 0.81 | .92 | .46** | .05 | — | | |
| 4. Negative work-related emotions | 1.77 | 0.72 | .90 | -.05 | .45** | -.19** | — | |
| 5. Psychological capital | 4.53 | 0.80 | .90 | .39** | -.09* | .58** | -.46** | — |
| 6. Work engagement | 3.55 | 1.28 | .94 | .46** | .06 | .79** | -.23** | .57** |

Note. *N* = 748.

* $p < .05$, ** $p < .01$.

correlations between variables are inflated (Spector, 2006). Therefore, before testing our conceptual model, we tested whether a single factor could account for all the variance in our data (Podsakoff et al., 2003). The basic assumption of this technique is that if a substantial amount of CMV is present, either a single factor will emerge from the factor analysis, or one general factor will account for most of the covariance between measures. To analyse the data, we employed a confirmatory factor analysis with MPlus 8.8 (Muthén et al., 2017) with robust errors maximum likelihood estimation. We found that a one-factor model was not fitted to the data well in the light of all fit indices (RMSEA = .293, 90% CI = [.273, .314], SRMR = .137, CFI = 0.699, TLI = 0.498). These results indicated that CMV is an unlikely explanation for our findings.

Structural Model

To analyse the data, in line with the preregistered protocol, we employed a path analysis with MPlus (Muthén et al., 2017). We tested the indirect effects by examining bootstrap confidence intervals using a bootstrap procedure with 10,000 samples. The logic behind the analyses is the same as in a hierarchical regression analysis. The path model estimated in the first step considered predictors (the perceived frequency of positive and negative work events), mediators (positive and negative work-related emotions) and a dependent variable (work engagement). We allowed both mediators to correlate. As the model was saturated, it had the best fit possible since it perfectly reproduces all of the variances, covariances and means ($\chi^2 = 0$, $df = 0$, RMSEA = 0, 90% CI [0, 0], SRMR = 0, CFI = 1.00, TLI = 1.00). The results (standardised path coefficients) are presented in Table 2 as Step 1. Positive and negative work-related emotions together with the perceived frequency of positive and negative work events accounted for 65% of work engagement variance.

Mediation by Positive and Negative Work-Related Emotions

To test for possible mediation effects as predicted in hypotheses H1a,b and H2a,b, we used a bias-corrected bootstrapping procedure with 10,000 samples (Hayes, 2017). The significance of the total, direct and indirect effects was tested in a saturated model to allow all path coefficients to be estimated (Step 1 in Table 2). The total effect of positive events on work engagement was significant, $\beta = .55$, $se = .03$, 95% boot CI [.48, .62], such that a higher perceived frequency of positive events at work led to higher work engagement. The direct effect of the perceived frequency of positive events on work engagement was significant, $\beta = .13$, $se = .03$, 95% boot CI [.07, .19]. The relative indirect effect via positive work-related emotions was significant, $\beta = .39$, $se = .03$, 95% boot CI [.34, .45], as well as the relative indirect effect via negative work-related emotions, $\beta = .03$, $se = .01$, 95% boot CI [.01, .05].

Furthermore, the total effect of the perceived frequency of negative events on work engagement was

also significant, $\beta = -.20$, $se = .04$, 95% boot CI [-.27, -.12], which implies that a higher perceived frequency of negative events led to lower work engagement. The direct impact of the perceived frequency of negative events on work engagement was not significant, $\beta = -.001$, $se = .03$, 95% boot CI [-.06, .05]. The indirect effect via positive work-related emotions was significant, $\beta = -.14$, $se = .03$, 95% boot CI [-.19, -.09], as well as the indirect effect via negative work-related emotions, $\beta = -.05$, $se = .02$, 95% boot CI [-.09, -.02].

Altogether, the pattern of results indicates that positive and negative work-related emotions mediate the relationships between perceived frequency of positive and negative events and work engagement. These patterns of results provided formal support for the mediation hypotheses H1a,b and H2a,b.

Moderation by Psychological Capital

In the second step, we added PsyCap as a moderator operating on paths from the perceived frequency of positive and negative events. We investigated its impact on work engagement (H3a,b) and positive and negative work-related emotions (H4a,b and H5a,b). Our theoretical model was again saturated, it had the best fit possible, $\chi^2 = 0$, $df = 0$, RMSEA = 0, 90% CI [0, 0], SRMR = 0, CFI = 1.00, TLI = 1.00. The results (standardised path coefficients) are presented in Table 2 (Step 2). The main effects of PsyCap on positive and negative work-related emotions and work engagement were significant. The only significant interaction we found was between PsyCap and the perceived frequency of negative events on negative work-related emotions, providing initial support for hypothesis H5b. We did not find support for hypotheses H3a,b, H4a,b and H5a.

In the next step, we decomposed the interaction between PsyCap and the perceived frequency of negative events using the pick-a-point approach and simple-slopes analysis and tested our hypothesised model at three levels of the moderator: mean, 1 *SD* above, and 1 *SD* below mean (Hayes, 2017). The standardised path coefficients estimated for three levels of PsyCap are presented in Step 3 in Table 2. The analysis revealed that the path between the perceived frequency of negative events and negative work-related emotions was stronger for low PsyCap than for medium and high PsyCap participants, which aligns with H5b.

Finally, we tested separately for a possible mediation effect for low, medium and high PsyCap participants, again using a bias-corrected bootstrapping procedure with 10,000 samples (Hayes, 2017). The bootstrap results of the indirect effects for low, medium and high PsyCap are shown in Table 3. Although we found that PsyCap moderated the relationship between perceived frequency of negative events and negative work-related emotions, the relationship between negative work-related emotions and work engagement was not significant. Therefore, we did not find an indirect effect of negative events on work engagement via negative emotions at all levels of PsyCap. The remaining paths were not moderated by PsyCap, so the results were similar across the sample. The total effect

Table 2. Results of the Path Analysis

| Path | Regression Step 1 | | Regression Step 2 | | Simple slopes analysis Step 3 | | | | | | Multi-Group analysis Step 4 | | | Chi-square comparison | Df(1) |
|------------------------------|-------------------|-----|-------------------|-----|-------------------------------|---------------|-------------|---------------------|---------------------|---------|-----------------------------|---------|-----|-----------------------|--------|
| | β | SE | β | SE | Low PsyCap | Medium PsyCap | High PsyCap | US sample (n = 494) | PL sample (n = 254) | β | SE | β | SE | | |
| Major paths | | | | | | | | | | | | | | | |
| PEW → WE | .13*** | .03 | .11*** | .03 | .10* | .11** | .11** | .11** | .04 | .08 | .06 | .06 | .06 | .06 | 3.87* |
| NEW → WE | -.00 | .03 | .00 | .03 | .01 | .00 | -.00 | .04 | .04 | -.07 | .06 | .06 | .06 | .06 | 1.33 |
| PEM ↔ NEM | -.08*** | .03 | .06* | .02 | | | | .03 | .03 | .02 | .03 | .03 | .03 | .03 | 0.07 |
| Detailed paths | | | | | | | | | | | | | | | |
| PEW → PEM | .55*** | .03 | .29*** | .04 | .29*** | .29*** | .29*** | .28*** | .05 | .30*** | .05 | .05 | .05 | .05 | 0.02 |
| NEW → PEM | -.19*** | .04 | -.04 | .03 | -.03 | -.04 | -.04 | -.03 | .04 | -.09† | .05 | .05 | .05 | .05 | 1.01 |
| PEM → WE | .72*** | .03 | .67*** | .03 | .67*** | .67*** | .67*** | .67*** | .03 | .60*** | .06 | .06 | .06 | .06 | 5.56* |
| PEW → NEM | -.32*** | .04 | -.12** | .04 | -.13* | -.12** | -.11* | -.07 | .05 | -.21*** | .05 | .05 | .05 | .05 | 7.95** |
| NEW → NEM | .59*** | .04 | .47*** | .03 | .57*** | .47*** | .36*** | .45*** | .06 | .48*** | .05 | .05 | .05 | .05 | 0.17 |
| NEM → WE | -.09*** | .03 | -.05† | .03 | -.05† | -.05† | -.05† | -.10** | .03 | .03 | .06 | .06 | .06 | .06 | 4.19* |
| Main effect of PsyCap | | | | | | | | | | | | | | | |
| PsyCap → PEM | .46*** | .05 | | | | | | .49*** | .04 | .49*** | .05 | .05 | .05 | .05 | 0.97 |
| PsyCap → NEM | -.36*** | .05 | | | | | | -.33*** | .05 | -.43*** | .05 | .05 | .05 | .05 | 7.78** |
| PsyCap → WE | .12*** | .06 | | | | | | .11** | .04 | .15* | .06 | .06 | .06 | .06 | 3.68† |
| Moderation by PsyCap | | | | | | | | | | | | | | | |
| PsyCap x PEW → PEM | -.00 | .03 | | | | | | .05 | .04 | -.10* | .05 | .05 | .05 | .05 | 6.34* |
| PsyCap x PEW → NEM | .01 | .03 | | | | | | .01 | .04 | .05 | .05 | .05 | .05 | .05 | 0.56 |
| PsyCap x NEW → PEM | -.00 | .03 | | | | | | -.02 | .04 | .04 | .05 | .05 | .05 | .05 | 0.06 |
| PsyCap x NEW → NEM | -.11*** | .03 | | | | | | -.10** | .04 | -.11* | .05 | .05 | .05 | .05 | 0.08 |
| PsyCap x PEW → WE | .00 | .02 | | | | | | -.02 | .03 | .05 | .05 | .05 | .05 | .05 | 1.82 |
| PsyCap x NEW → WE | -.01 | .02 | | | | | | .01 | .03 | -.05 | .05 | .05 | .05 | .05 | 0.99 |
| R ² (WE) | 65% | | 66% | | 71% | | | | | | 51% | | | | |

Note. PEW = Perceived frequency of positive events at work; NEW = Perceived frequency of negative events at work; PEM = Positive work-related emotions; NEM = Negative work-related emotions; WE = Work engagement.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3. Mediation Effect at Three Levels of the Moderator (PsyCap)

| Effects | Low PsyCap | | | Medium PsyCap | | | High PsyCap | | | |
|------------------------------|------------|-----|-----------|---------------|-----|-----------|-------------|-----|-----------|--|
| | β | SE | BC 95% CI | β | SE | BC 95% CI | β | SE | BC 95% CI | |
| PEW \rightarrow WE | | | | | | | | | | |
| Indirect effect via PEm | .20 | .04 | .12 .27 | .20 | .03 | .14 .25 | .19 | .03 | .14 .25 | |
| Indirect effect via NEm | .01 | .01 | .000 .02 | .01 | .00 | .000 .02 | .01 | .00 | .000 .02 | |
| Joint indirect effect of PEW | .20 | .04 | .13 .27 | .20 | .03 | .15 .26 | .20 | .03 | .15 .26 | |
| Direct effect of PEW | .10 | .05 | .004 .20 | .11 | .03 | .04 .17 | .11 | .03 | .05 .17 | |
| Total effect of PEW | .31 | .06 | .19 .41 | .31 | .04 | .23 .38 | .31 | .04 | .24 .38 | |
| NEW \rightarrow WE | | | | | | | | | | |
| Indirect effect via PEm | -.02 | .03 | -.08 .04 | -.02 | .02 | -.07 .02 | -.03 | .03 | -.08 .04 | |
| Indirect effect via NEm | -.03 | .02 | -.07 .004 | -.02 | .01 | -.05 .003 | -.02 | .01 | -.04 .002 | |
| Joint indirect effect of NEW | -.05 | .04 | -.12 .02 | -.05 | .03 | -.10 .003 | -.05 | .03 | -.10 .01 | |
| Direct effect of NEW | .01 | .05 | -.08 .10 | .00 | .03 | -.05 .06 | -.00 | .03 | -.07 .07 | |
| Total effect of NEW | -.04 | .05 | -.14 .07 | -.04 | .03 | -.11 .02 | -.05 | .04 | -.12 .03 | |

Note: N = 748; 10,000 bootstrap samples.
 SE = standard error; BC = bias corrected; CI = confidence interval.
 PEW = Perceived frequency of positive events at work, NEW = Perceived frequency of negative events at work, PEm = Positive work-related emotions, NEm = Negative work-related emotions, WE = Work engagement.

of perceived frequency of negative events on work engagement was not significant, nor was the direct effect of negative events on work engagement and both indirect effects. The total and the direct effects of perceived frequency of positive events on work engagement were significant and positive. The indirect effect via positive work-related emotions was significant, while the indirect effect via negative work-related emotions was not. In summary, we observed both direct and indirect effects of perceived frequency of positive events at work on engagement, regardless of the level of PsyCap.

A Comparative Analysis of the US and Polish Samples

As our sample included both Polish and American employees, we conducted additional analyses to examine whether our hypothesised model is robust across the two countries. To test the difference between the two samples in a multi-group analysis (MGA), we investigated the χ^2 change between the unconstrained model, where we allowed for the possibility of different path coefficients between the two groups, and the constrained model, assuming that the path coefficients would be the same in the two samples. A χ^2 comparison demonstrated that the unconstrained model provided a better fit for the data than the constrained model ($D\chi^2 = 34.471$, $Ddf = 18$, $p = .011$), suggesting that at least some path coefficients are different across the two samples. Further χ^2 comparison showed significant differences between the Polish and the US samples concerning seven path coefficients (Table 2, MGA).

Next, we tested the indirect effects predicted in hypotheses H1a,b and H2a,b separately for both samples (see ESM for details). The pattern of indirect effects via positive and negative work-related emotions was different for the US participants (see Table E4a in ESM) than for the Polish participants (see Table E4b in ESM). Indirect effects of positive emotions, both from the perceived frequency of positive and negative work events on work engagement, were consistently observed in the US and Polish samples, supporting hypotheses H1a,b and suggesting a robust pattern. However, the indirect effects from the perceived frequency of positive and negative events via negative emotions to work engagement were observed only in the US sample, indicating a specific pattern in this group. Consequently, the hypotheses H2a,b were supported only in the US sample.

In the next step, we introduced PsyCap as a moderator and examined its impact on work engagement, specifically addressing the hypotheses H3a,b, H4a,b and H5a,b, separately for each sample. In the Polish sample we identified two significant interaction effects: (1) between PsyCap and perceived frequency of positive events on positive work-related emotions, confirming hypothesis H4a; and (2) between PsyCap and perceived frequency of negative events on negative work-related emotions supporting H5b (see Table E4b in ESM). In the US sample, we found a significant interaction only between PsyCap and perceived frequency of negative events on negative emotions (see the Table E4a in ESM), consistent

with hypothesis H5b and suggesting that this moderation effect of PsyCap is consistent in both samples.

Finally, the decomposition of the interactions performed separately for each sample revealed different moderated mediation patterns (see ESM for details). Although we observed a significant interaction between PsyCap and perceived frequency of negative events on negative work-related emotions in both samples, the moderated mediation on this path was significant only in the US sample. The indirect effect from perceived frequency of negative events on work engagement through negative work-related emotions was negative, and stronger for high PsyCap compared to low PsyCap participants (see Table E5a in ESM). In the Polish sample, we also identified interaction between PsyCap and the perceived frequency of positive events on positive work-related emotions. Specifically, we observed that the perceived frequency of positive work events was associated with work engagement, both indirectly and directly in high PsyCap participants, and indirectly only in low PsyCap participants (see Table E5b in ESM). This indirect effect was weaker for high PsyCap participants than for those low in PsyCap. In the US sample, perceived frequency of positive work events was associated with work engagement levels both directly and indirectly through positive work-related emotions, regardless of the level of PsyCap. In Table E7 in ESM, we have presented the summary of our hypotheses tested in the whole sample and in the US and Polish samples.

DISCUSSION

Our study makes several important theoretical contributions. First, we contribute to the understanding of the event–emotion–engagement process by grounding our research in affective events theory (AET; Weiss & Cropanzano, 1996) and broaden-and-build theory (BBT; Fredrickson, 2001). To date, researchers have examined that positive emotions act as a mediating construct between resources and engagement (Schaufeli et al., 2009) and have classified both positive and negative affective work events (Basch & Fisher, 2000; Ohly & Schmitt, 2015). However, there is little research examining an integrated approach that encompasses the entire chain of experience, from perceived events at work, through to emotional reactions to these events, to engagement. As predicted, our findings support the mediating role of both positive and negative work-related emotions in the relationship between perceived frequency of positive and negative work events and engagement at work. The results are consistent with the assumptions of AET (Weiss & Cropanzano, 1996) and confirm the existence of the environment–emotions–behaviour chain at work. From the perspective of BBT (Fredrickson, 2001), we supported the strong positive association between positive work-related emotions and work engagement and additionally the weak but still significant association between negative work-related emotions and employee engagement.

Second, we contribute to positive psychology in human resource management by showing that PsyCap, as a higher-level personal resource, moderates the relationship between perceived frequency of negative events at work and employees' negative emotional response to these events. We found no differences between low and high PsyCap participants in the relationship between perceived frequency of negative events and work engagement mediated by negative work-related emotions. When PsyCap was included in the analysis, the relationship between negative work-related emotions and work engagement became only marginally significant. We find an explanation for this phenomenon in Bledow et al.'s (2011) affective shift model, which suggests that work engagement is tied to the presence of positive affect but arises from a dynamic interplay of positive and negative affect. This means that the timing of negative emotions followed by positive emotions experienced by an employee at work has an impact on engagement at work. A shift from experiencing negative affect to high levels of positive affect in the face of a negative event could have enormous motivational potential and improve employee engagement (Bledow et al., 2011). Therefore, it is possible that the relationships between negative emotions and work engagement are more complex than those between positive emotions and work engagement, especially when personal resources are involved.

Finally, from an international perspective, we have empirically demonstrated that the role of PsyCap in the relationship among work-related events, associated emotions and work engagement is culture-specific. Essentially, we have confirmed that North Americans have higher levels of PsyCap compared to Poles. They also perceive fewer negative work events and generally experience weaker work-related emotions and engagement at work than Poles. In the US sample, we found a moderated mediation on the path between perceived frequency of negative work events and engagement through negative work-related emotions. This indirect effect was negative and stronger for high PsyCap participants compared to low PsyCap participants. Our finding is consistent with research showing that personal resources play a buffering role between a challenging work environment and job engagement (Xanthopoulou et al., 2013). In the Polish sample, we observed that a moderated mediation effect on the path from perceived frequency of positive events was related to engagement via positive work-related emotions. Here, PsyCap acts as a bank of positive resources that makes engagement at work less dependent on positive emotions resulting from positive work events. These cross-cultural differences in the role of PsyCap may be due to the so-called "Polish culture of complaining" (Wojciszke, 2004), which states that it is normative for Poles to experience negative emotional states and to complain frequently. In this context, PsyCap may serve as an important resource that allows individuals to be less preoccupied with constantly monitoring their surroundings. In the US culture, on the other hand, which is often referred to as the "culture of affirmation" and where the

emphasis is on being or appearing happy (Wojciszke, 2004), the effects of a high PsyCap on experiencing events may not be as pronounced.

Practical Implications

Our findings have practical implications for the development and management of HRD processes that focus on promoting employee work engagement and well-being. Creating an organisational culture that promotes positive perceptions of work events could enhance employee work engagement. Moreover, the way employees perceive and experience work events plays a crucial role in strengthening their work engagement. Our study provides empirical evidence that the perceived frequency of positive and negative events is related to employees' emotions, which are highly relevant to work engagement, especially positive emotions. HR practices – such as training and development, appraisal and reward, job design and task allocation – can emphasise the importance of positive elements of work, such as receiving praise from a supervisor or creating opportunities for employees to plan their careers. Understanding the processes that shape employee engagement, including the role of personal resources such as PsyCap, can provide important information for developing HR. Research has shown that PsyCap can be used effectively in evidence-based staff development interventions (Russo & Stoykova, 2015) and improves staff well-being (Luthans & Broad, 2022). Furthermore, according to Story et al. (2013), leaders' levels of positive PsyCap can have a contagion effect on their followers in different parts of the world. By increasing PsyCap in employees, whether through specific training or appropriate leaders, an organisation provides them with resources that reduce the extent to which their emotions at work are associated with events that happen to them. However, PsyCap can have different effects depending on the work culture in a particular country, as our study shows.

Limitations and Future Directions

One of the obvious limitations of our study is its cross-sectional design, which makes it impossible to derive causal statements about the relationship among our variables of interest. Although we explored the possible reversed model, which did not fit the data (see ESM), future research should collect longitudinal data to better understand the causality of the effects we studied. Second, our study relied on self-report questionnaires. Although employees' perceptions of work events are an important source of information (Weiss & Rupp, 2011), these perceptions may not reflect the objective reality of work. PsyCap could influence the way employees perceive the frequency of work events and how they make a retrospective assessment. Therefore, capturing both sources of data – the objective frequency of events that occur in their regular work and their interpretations of these events – by combining self-reports and other types of evaluations in a day-by-day diary study could be a way to disentangle these effects. Next, we measured affective events based

solely on their perceived frequency. Future studies could examine different dimensions of work events perceived by employees, such as importance, demandingness, or familiarity (Oreg et al., 2020). Because of the way we measured work-related emotions by asking our participants about their emotions over the past year at work, we cannot claim to have captured the ephemeral nature of their emotions. A diary study could address this issue once again. In addition, the fact that we could not consistently demonstrate the significance of interactional and indirect effects could mean that our research was not sufficiently informative, especially the Polish sample. As effect sizes for interactions tend to be small, especially in non-experimental studies (Frazier et al., 2004), it might be worth replicating our findings in a larger sample, preferably with a more systematic approach to participant recruitment rather than relying on social media. This could help to confirm the robustness of the effects.

CONCLUSION

PsyCap enables workers to cope with difficult situations and serves as a bank of positive resources. More optimistic, hopeful, resilient and efficient employees are more likely to “weather the storm” of a dynamic and global environment typical of most modern organisations than their lower PsyCap counterparts. Using a two-sample study conducted with participants from the United States and Poland, we have shown that PsyCap can play a differential role in shaping individuals’ emotional responses to the frequency of positive and negative events, which in turn is related to their level of engagement in the workplace. Given this role of PsyCap in fostering employee engagement, we call for more focus on PsyCap development through targeted training and future research on different work cultures.

REFERENCES

- Alessandri, G., Consiglio, C., Luthans, F., & Borgogni, L. (2018). Testing a Dynamic Model of the Impact of Psychological Capital on Work Engagement and Job Performance. *Career Development International*, 23(1), 33–47. <https://doi.org/10.1108/CDI-11-2016-0210>.
- Avey, J. B., Avolio, B. J., & Luthans, F. (2011). Experimentally Analyzing the Impact of Leader Positivity on Follower Positivity and Performance. *The Leadership Quarterly*, 22(2), 282–294. <https://doi.org/10.1016/j.leaqua.2011.02.004>.
- Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-Analysis of the Impact of Positive Psychological Capital on Employee Attitudes, Behaviors, and Performance. *Human Resource Development Quarterly*, 22(2), 127–152. <https://doi.org/10.1002/hrdq.20070>.
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can Positive Employees Help Positive Organizational Change? Impact of Psychological Capital and Emotions on Relevant Attitudes and Behaviors. *Journal of Applied Behavioral Science*, 44(1), 48–70. <https://doi.org/10.1177/0021886307311470>.
- Bakker, A. B., & Albrecht, S. (2018). Work Engagement: Current Trends. *Career Development International*, 23(1), 4–11. <https://doi.org/10.1108/CDI-11-2017-0207>.
- Bakker, A. B., & Bal, P. M. (2010). Weekly Work Engagement and Performance: A Study among Starting Teachers. *Journal of Occupational and Organizational Psychology*, 83(1), 189–206. <https://doi.org/10.1348/096317909X402596>.
- Basch, J., & Fisher, C. D. (1998). Affective Events–Emotions Matrix: A Classification of Work Events and Associated Emotions. In N.M. Ashkanasy, C.E. Härtel, & W.J. Zerbe (Eds.), *Emotions in the Workplace: Research, Theory, and Practice* (pp. 36–48). Quorum Books/Greenwood Publishing Group.
- Bledow, R., Schmitt, A., Frese, M., & Kühnel, J. (2011). The Affective Shift Model of Work Engagement. *Journal of Applied Psychology*, 96(6), 1246–1257. <https://doi.org/10.1037/a0024532>.
- Bowling, N. A., Beehr, T. A., Wagner, S. H., & Libkuman, T. M. (2005). Adaptation-Level Theory, Opponent Process Theory, and Dispositions: An Integrated Approach to the Stability of Job Satisfaction. *Journal of Applied Psychology*, 90(6), 1044–1053. <https://doi.org/10.1037/0021-9010.90.6.1044>.
- Chirkowska-Smolak, T. (2012). *Psychologiczny Model Zaangażowania w Pracę*. Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza.
- Conway, A. M., Tugade, M. M., Catalano, L. I., & Fredrickson, B. L. (2013). The Broaden-and-Build Theory of Positive Emotions: Form, Function, and Mechanisms. In S. David, O. Boniwell, and A.C. Ayers (Eds.), *Oxford Handbook of Happiness* (pp. 17–34). Oxford University Press.
- Corbeau, A., & Iliescu, D. (2023). The Link Between Work Engagement and Job Performance. *Journal of Personnel Psychology*, 0(0), 1–12. <https://doi.org/10.1027/1866-5888/a000316>.
- Demerouti, E., & Cropanzano, R. (2017). The Buffering Role of Sportsmanship on the Effects of Daily Negative Events. *European Journal of Work and Organizational Psychology*, 26(2), 263–274. <https://doi.org/10.1080/1359432X.2016.1257610>.
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing Moderator and Mediator Effects in Counseling Psychology Research. *Journal of Counseling Psychology*, 51(1), 115–134. <https://doi.org/10.1037/0022-0167.51.1.115>.
- Fredrickson, B. L. (2001). The Role of Positive Emotions in Positive Psychology. *The American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066x.56.3.218>.
- Fredrickson, B. L., & Joiner, T. (2002). Positive Emotions Trigger Upward Spirals Toward Emotional Well-Being. *Psychological Science*, 13(2), 172–175. <https://doi.org/10.1111/1467-9280.00431>.
- Fredrickson, B. L., Mancuso, R. A., 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>.
- Gross, J. J. (2014). *Handbook of Emotion Regulation*. The Guilford Press.
- Gruman, J. A., & Budworth, M. H. (2022). Positive Psychology and Human Resource Management: Building an HR Architecture to Support Human Flourishing. *Human Resource Management Review*, 32(3), 100911. <https://doi.org/10.1016/j.hrmr.2022.100911>.
- Harter, J. K., Schmidt, F. L., Asplund, J. W., Killham, E. A., & Agrawal, S. (2010). Causal Impact of Employee Work Perceptions on the Bottom Line of Organizations. *Perspectives on Psychological Science*, 5(4), 378–389. <https://doi.org/10.1177/1745691610374589>.
- Hayes, A. F. (2017). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach* (2nd ed.). The Guilford Press.
- Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource Loss, Resource Gain, and Emotional Outcomes Among Inner City Women. *Journal of Personality and Social Psychology*, 84(3), 632–643. <https://doi.org/10.1037/0022-3514.84.3.632>.
- Ilies, R., & Judge, T. A. (2005). Goal Regulation across Time: The Effects of Feedback and Affect. *Journal of Applied Psychology*, 90(3), 453–467. <https://doi.org/10.1037/0021-9010.90.3.453>.
- Luthans, F., & Broad, J. D. (2022). Positive Psychological Capital to Help Combat the Mental Health Fallout from the Pandemic and VUCA Environment. *Organizational Dynamics*, 51(2), 100817. <https://doi.org/10.1016/j.orgdyn.2020.100817>.
- Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The Mediating Role of Psychological Capital in the Supportive Organizational Climate—Employee Performance Relationship. *Journal of Organizational Behavior*, 29, 219–238. <https://doi.org/10.1002/job>.

- Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological Capital: Developing the Human Competitive Edge*. Oxford University Press.
- Mäkikangas, A., & Kinnunen, U. (2003). Psychosocial Work Stressors and Well-Being: Self-Esteem and Optimism as Moderators in a One-Year Longitudinal Sample. *Personality and Individual Differences*, 35(3), 537–557. [https://doi.org/10.1016/S0191-8869\(02\)00217-9](https://doi.org/10.1016/S0191-8869(02)00217-9).
- Mignonac, K., & Herrbach, O. (2004). Linking Work Events, Affective States, and Attitudes: An Empirical Study of Managers' Emotions. *Journal of Business and Psychology*, 19(2), 221–240. <https://doi.org/10.1007/s10869-004-0549-3>.
- Muthén, B. O., Muthén, L. K., & Asparouhov, T. (2017). *Regression and Mediation Analysis Using MPlus*. Muthén & Muthén.
- 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. <https://doi.org/10.1007/s10869-013-9328-3>.
- Oreg, S., Edwards, J. A., & Rauthmann, J. F. (2020). The Situation Six: Uncovering Six Basic Dimensions of Psychological Situations from the Hebrew Language. *Journal of Personality and Social Psychology*, 118(4), 835–863. <https://doi.org/10.1037/pspp0000280.supp>.
- Ouweneel, E., le Blanc, P. M., Schaufeli, W. B., & van Wijhe, C. I. (2012). Good Morning, Good Day: A Diary Study on Positive Emotions, Hope, and Work Engagement. *Human Relations*, 65(9), 1129–1154. <https://doi.org/10.1177/0018726711429382>.
- Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making Things Happen: A Model of Proactive Motivation. *Journal of Management*, 36(4), 827–856. <https://doi.org/10.1177/0149206310363732>.
- Podsakoff, P. M., MacKenzie, S. B., Lee J. Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>.
- Russo, S. D., & Stoykova, P. (2015). Psychological Capital Intervention (PCI): A Replication and Extension. *Human Resource Development Quarterly*, 26(3), 329–347. <https://doi.org/10.1002/hrdq.21212>.
- Saks, A. M., & Gruman, J. A. (2014). What Do We Really Know About Employee Engagement? *Human Resource Development Quarterly*, 25(2), 155–182. <https://doi.org/10.1002/hrdq.21187>.
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking Organizational Resources and Work Engagement to Employee Performance and Customer Loyalty: The Mediation of Service Climate. *Journal of Applied Psychology*, 90(6), 1217–1227. <https://doi.org/10.1037/0021-9010.90.6.1217>.
- Schaufeli, W. B. (2012). Work Engagement. What Do We Know and Where Do We Go? *Romanian Journal of Applied Psychology*, 14(1), 3–10.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job Demands, Job Resources, and Their Relationship with Burnout and Engagement: A Multi-Sample Study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>.
- Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How Changes in Job Demands and Resources Predict Burnout, Work Engagement, and Sickness Absenteeism. *Journal of Organizational Behavior*, 30(7), 893–917. <https://doi.org/10.1002/job.595>.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive Psychology Progress: Empirical Validation of Interventions. *American Psychologist*, 60(5), 410–421. <https://doi.org/10.1037/0003-066X.60.5.410>.
- Spector, P. E. (2006). Method Variance in Organizational Research: Truth or Urban Legend? *Organizational Research Methods*, 9(2), 221–232. <https://doi.org/10.1177/1094428105284955>.
- Story, J. S. P., Youssef-Morgan, C. M., Luthans, F., Barbuto Jr., J. E., & Bovaird, J. A. (2013). Contagion Effect of Global Leaders' Positive Psychological Capital on Followers: Does Distance and Quality of Relationship Matter? *The International Journal of Human Resource Management*, 24(13), 2534–2553. <https://doi.org/10.1080/09585192.2012.744338>.
- Wang, N., Zhu, J., Dormann, C., Song, Z., & Bakker, A. B. (2020). The Daily Motivators: Positive Work Events, Psychological Needs Satisfaction, and Work Engagement. *Applied Psychology*, 69(2), 508–537. <https://doi.org/10.1111/apps.12182>.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. <https://doi.org/10.1037/0022-3514.54.6.1063>.
- 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. <https://doi.org/10.3390/ijerph18136699>.
- Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A Theoretical Discussion of the Structure, Causes and Consequences of Affective Experiences at Work. *Research in Organizational Behavior*, 18(1), 1–74. [https://doi.org/10.1016/0149-2063\(96\)00001-0](https://doi.org/10.1016/0149-2063(96)00001-0).
- Weiss, H. M., & Rupp, D. E. (2011). Experiencing Work: An Essay on a Person-Centric Work Psychology. *Industrial and Organizational Psychology*, 4(1), 83–97. <https://doi.org/10.1111/j.1754-9434.2010.01302.x>.
- Werner, J. M., & DeSimone, R. L. (2011). *Human Resource Management*. Cengage Learning.
- Wernsing, T. (2014). Psychological Capital: A Test of Measurement Invariance Across 12 National Cultures. *Journal of Leadership and Organizational Studies*, 21(2), 179–190. <https://doi.org/10.1177/1548051813515924>.
- Wojciszke, B. (2004). The Negative Social World: The Polish Culture of Complaining. *International Journal of Sociology*, 34(4), 38–59. <https://doi.org/10.1080/00207659.2004.11043140>.
- World Atlas of Global Issues. (2018). *Multinational Corporations* [online]. <https://espace-mondial-atlas.sciencespo.fr/en/topic-strategies-of-transnational-actors/article-3A11-EN-multinational-corporations.html>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal Relationships between Job Resources, Personal Resources, and Work Engagement. *Journal of Vocational Behavior*, 74(3), 235–244. <https://doi.org/10.1016/j.jvb.2008.11.003>.
- Xanthopoulou, D., Bakker, A. B., & Fischbach, A. (2013). Work Engagement among Employees Facing Emotional Demands: The Role of Personal Resources. *Journal of Personnel Psychology*, 12(2), 74–84. <https://doi.org/10.1027/1866-5888/a000085>.

ELECTRONIC SUPPLEMENTARY MATERIAL

Table E1. Detailed Information About the Samples

| Sociodemographic Characteristics | U.S. participants (<i>n</i> = 494) | | Polish participants (<i>n</i> = 254) | | The whole sample (<i>N</i> = 748) | | Comparison of US and Polish samples |
|----------------------------------|--|-------------------|--|------------------|---------------------------------------|------|--|
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | |
| age | <i>M</i> = 38.74 | <i>SD</i> = 12.75 | <i>M</i> = 33.38 | <i>SD</i> = 7.58 | | | <i>t</i> (730.65) = 7.20*** |
| Gender | | | | | | | |
| women | 240 | 48.6 | 148 | 58.3 | 388 | 51.9 | $\chi^2(2) = 10001.15^{***}$ |
| men | 248 | 50.2 | 106 | 41.7 | 354 | 47.3 | |
| non-binary | 5 | 1 | 0 | 0 | 5 | 0.7 | |
| not stated | 1 | 0.2 | 0 | 0 | 1 | 0.1 | |
| Education | | | | | | | |
| less than secondary | 32 | 6.5 | 0 | 0 | 32 | 4.3 | $\chi^2(4) = 500587.62^{***}$ |
| secondary education | 47 | 9.5 | 22 | 8.7 | 69 | 9.2 | |
| bachelor's degree | 270 | 54.7 | 48 | 18.9 | 318 | 42.5 | |
| master's degree | 92 | 18.6 | 117 | 46.1 | 209 | 27.9 | |
| postgraduate | 53 | 6.5 | 67 | 26.4 | 120 | 16 | |
| Period of employment | | | | | | | |
| less than 1 year | 17 | 3.4 | 61 | 24 | 78 | 10.4 | $\chi^2(4) = 255.62^{***}$ |
| 1–2 years | 25 | 5.1 | 76 | 29.9 | 101 | 13.5 | |
| 3–5 years | 56 | 11.3 | 52 | 20.5 | 108 | 14.4 | |
| 5–10 years | 99 | 20 | 36 | 14.2 | 135 | 18 | |
| more than 10 years | 297 | 60.1 | 29 | 11.4 | 326 | 43.6 | |
| Job position | | | | | | | |
| blue-collar worker | 56 | 11.3 | 6 | 2.4 | 62 | 8.3 | $\chi^2(8) = 2235424.71^{***}$ |
| office worker | 80 | 16.2 | 24 | 9.4 | 104 | 13.9 | |
| specialist/senior specialist | 104 | 21.1 | 149 | 58.7 | 253 | 33.8 | |
| researcher/teaching staff | 33 | 6.7 | 8 | 3.1 | 41 | 5.5 | |
| line manager | 29 | 5.9 | 9 | 3.5 | 38 | 5.1 | |
| middle manager | 94 | 19 | 47 | 18.5 | 141 | 18.9 | |
| senior manager/executive | 23 | 4.7 | 11 | 4.3 | 34 | 4.5 | |
| other | 72 | 14.6 | 0 | 0 | 72 | 9.6 | |
| not stated | 3 | 0.6 | 0 | 0 | 3 | 0.4 | |
| Employment industry | | | | | | | |
| administration | 46 | 9.3 | 80 | 31.5 | 126 | 16.8 | $\chi^2(11) = 3574887.20^{***}$ |
| artistic/creative | 22 | 4.5 | 8 | 3.1 | 30 | 4 | |
| banking/finance/insurance | 37 | 7.5 | 13 | 12.2 | 68 | 9.1 | |
| construction/real estate | 20 | 4 | 2 | 0.8 | 22 | 2.9 | |
| education/trainings | 48 | 9.7 | 13 | 5.1 | 61 | 8.2 | |
| gastronomy/hotel/tourist | 20 | 4 | 3 | 1.2 | 23 | 3.1 | |
| IT/engineering | 72 | 14.6 | 58 | 22.8 | 130 | 17.4 | |
| production/logistics | 22 | 4.5 | 37 | 14.6 | 59 | 7.9 | |
| health care | 43 | 8.7 | 10 | 3.9 | 53 | 7.1 | |
| sales/customer service | 61 | 12.3 | 12 | 4.7 | 73 | 9.8 | |
| transport | 9 | 1.8 | 0 | 0 | 9 | 1.2 | |
| other | 94 | 19 | 0 | 0 | 94 | 12.6 | |
| Size of the employing company | | | | | | | |
| small (up to 50 employees) | 141 | 28.5 | 54 | 21.3 | 195 | 26.1 | $\chi^2(2) = 9.19^*$ |
| middle (50–300) | 112 | 22.7 | 40 | 15.7 | 152 | 20.3 | |
| large (more than 300) | 241 | 48.8 | 160 | 63.0 | 401 | 53.6 | |

* $p < .05$, *** $p < .001$

**DESCRIPTIVE STATISTICS
FOR THE US AND THE POLISH SAMPLE**

The descriptive statistics, Cronbach α s and correlations between the variables for the US and the Polish samples are presented separately in Table E2a and E2b. To test differences in means between these two samples, we conducted a series of two-sample t-tests. US participants, in comparison to Polish participants, revealed a lower level

of the perceived frequency of negative work events, $t(746) = -2.51, p = .012$, a lower level of both negative and positive work-related emotions, respectively $t(453.49) = -6.93, p < .001$ and $t(682.96) = -3.43, p < .001$, a lower level of work engagement $t(659.41) = -2.07, p = .039$, but a higher level of PsyCap, $t(746) = 2.08, p = .019$. The difference in the perceived frequency of positive work events between the US and the Polish participants was insignificant $t(613.86) = 0.8, p = .424$.

Table E2a. Descriptive Statistics, Cronbach's Alphas, and Correlations for Study Variables for the US sample

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 | 5 |
|---|----------|-----------|----------|-------|-------|--------|--------|-------|
| 1. Perceived frequency of positive events at work | 2.89 | 1.02 | .88 | — | | | | |
| 2. Perceived frequency of negative events at work | 1.64 | 0.95 | .88 | .49** | — | | | |
| 3. Positive work-related emotions | 3.40 | 0.88 | .93 | .49** | .06 | — | | |
| 4. Negative work-related emotions | 1.64 | 0.66 | .91 | .00 | .45** | -.18** | — | |
| 5. Psychological capital | 4.58 | 0.81 | .91 | .44** | -.11* | .60** | -.42** | — |
| 6. Work engagement | 3.49 | 1.39 | .95 | .51** | .07 | .82** | -.26** | .61** |

Note. $N = 494$.

* $p < .05$, ** $p < .01$.

Table E2b. Descriptive Statistics, Cronbach's Alphas, and Correlations for Study Variables for the Polish sample

| Variable | <i>M</i> | <i>SD</i> | α | 1 | 2 | 3 | 4 | 5 |
|---|----------|-----------|----------|-------|-------|--------|--------|-------|
| 1. Perceived frequency of positive events at work | 2.84 | 0.82 | .82 | — | | | | |
| 2. Perceived frequency of negative events at work | 1.82 | 0.86 | .85 | .39** | — | | | |
| 3. Positive work-related emotions | 3.58 | 0.61 | .85 | .39** | .00 | — | | |
| 4. Negative work-related emotions | 2.03 | 0.75 | .90 | -.14* | .43** | -.34** | — | |
| 5. Psychological capital | 4.45 | 0.79 | .89 | .27** | -.04 | .60** | -.54** | — |
| 6. Work engagement | 3.67 | 1.02 | .89 | .33** | -.02 | .70** | -.29** | .50** |

AUXILIARY PATH ANALYSES

As some paths assumed in our theoretical model tested in Step 1 (Table 2 in the main text) were nonsignificant, we tested an alternative model excluding these insignificant paths. The alternative model fitted to data very well ($\chi^2 = 0.015$, $df = 1$, $p = .902$, RMSEA < .001, 90% CI [.000, .042], SRMR = 0.001, CFI = 1.00, TLI = 1.00) and accounted for 65% of the work engagement variance. The results with standardised path coefficients are presented in Table E3, Step 1.

Next, as some paths assumed in our moderation model tested in Step 2 (Table 2 in the main text) were

nonsignificant, we tested an alternative moderation model excluding these insignificant paths. The fit indices showed that the model fit the data very well ($\chi^2 = 1.748$, $df = 4$, $p = .782$, RMSEA = .000, 90% CI [.000, .036], SRMR = 0.01, CFI = 1.00, TLI = 1.00). In the alternative model the main effects of PsyCap on positive and negative work-related emotions and work engagement were significant, and the interaction between PsyCap and the perceived frequency of negative events on negative work-related emotions remained significant. The results with standardised path coefficients are presented in Table E3, Step 2.

Table E3. *Auxiliary Path Analyses*

| Path | Regression Step 1 | | Regression Step 2 | |
|------------------------|-------------------|-----|-------------------|-----|
| | β | SE | β | SE |
| Major paths | | | | |
| PEW → WE | .13*** | .02 | .66*** | .03 |
| NEW → WE | - | - | - | - |
| PEm ↔ NEm | - | - | .06* | .02 |
| Detailed paths | | | | |
| PEW → PEm | .55*** | .04 | .27*** | .03 |
| NEW → PEm | -.19*** | .04 | - | - |
| PEm → WE | .72*** | .03 | .66*** | .03 |
| PEW → NEm | -.32*** | .04 | -.12** | .04 |
| NEW → NEm | .59*** | .04 | .47*** | .03 |
| NEm → WE | -.09*** | .02 | - | - |
| Main effects of PsyCap | | | | |
| PsyCap → PEm | - | - | .47*** | .03 |
| PsyCap → NEm | - | - | -.37*** | .03 |
| PsyCap → WE | - | - | .15*** | .03 |
| Moderation by PsyCap | | | | |
| PsyCap x PEW → PEm | - | - | - | - |
| PsyCap x PEW → NEm | - | - | - | - |
| PsyCap x NEW → PEm | - | - | - | - |
| PsyCap x NEW → NEm | - | - | -.10*** | .03 |
| PsyCap x PEW → WE | - | - | - | - |
| PsyCap x NEW → WE | - | - | - | - |
| R^2 (WE) | 65% | | 66% | |

Note. PEW = Perceived frequency of positive events at work, NEW = Perceived frequency of negative events at work, PEm = Positive work-related emotions, NEm = Negative work-related emotions, WE = Work engagement

* $p < .05$, ** $p < .01$, *** $p < .001$

STRUCTURAL MODEL FOR THE US AND POLISH SAMPLES

Because a multigroup analysis (MGA) using the χ^2 comparison showed significant differences between the Polish and US samples with respect to seven path coefficients (Table 2 in the main text), we tested for indirect effects by examining bootstrap confidence intervals with a 10,000-sample bootstrap procedure separately for the U. and Polish samples. As both models were saturated, they had the best possible fit ($\chi^2 = 0$, $df = 0$, RMSEA = 0, 90% CI [0, 0], SRMR = 0, CFI = 1.00, TLI = 1.00). Results (standardised path coefficients) are presented as Step 1 in Table E4a (US sample) and in Table E4b (Polish sample). Positive and negative work-related emotions along with perceived frequency of positive and negative work events explained 69.9% of the variance in work engagement in the US sample and 49.5% of the variance in work engagement in the Polish sample.

MEDIATION BY POSITIVE AND NEGATIVE WORK-RELATED EMOTIONS IN THE US AND POLISH SAMPLES

We tested for the effects predicted in hypotheses H1a, b and H2a,b separately in the two country samples using a 10,000-sample bias-corrected bootstrapping procedure (Hayes, 2017). The significance of the total, direct and indirect effects was tested in the saturated models so that all path coefficients could be estimated (Step 1 in Table E4a,b). In the US sample, the overall effect of positive events on engagement at work was significant, $\beta = .62$, $se = .04$, 95% boot CI [.54, .69], such that higher perceived frequency of positive events at work led to higher engagement at work. The direct effect of perceived frequency of positive events on engagement at work was significant, $\beta = .15$, $se = .04$, 95% boot CI [.07, .22]. The relative indirect effect via positive work-related emotions was significant, $\beta = .43$, $se = .04$, 95% boot CI [.36, .51], as was the relative indirect effect via negative work-related emotions, $\beta = .04$, $se = .01$, 95% boot CI [.02, .06].

In addition, the total effect of perceived frequency of negative events on work engagement was also significant, $\beta = -.23$, $se = .04$, 95% boot CI [-.31, -.15], indicating that higher perceived frequency of negative events led to lower work engagement. The direct effect of perceived frequency of negative events on work engagement was not significant, $\beta = .02$, $se = .03$, 95% boot CI [-.05, .08]. The indirect effect via positive work-related emotions was significant, $\beta = -.17$, $se = .03$, 95% boot CI [-.23, -.11], as was the indirect effect via negative work-related emotions, $\beta = -.08$, $se = .02$, 95% boot CI [-.12, -.05].

In the Polish sample, the total effect of positive events on work engagement was significant, $\beta = .40$, $se = .07$, 95% boot CI [.27, .53]. The direct effect of the perceived frequency of positive events on work engagement was insignificant, $\beta = .09$, $se = .06$, 95% boot CI [-.02, .19]. The relative indirect effect via positive work-related emotions was significant, $\beta = .30$, $se = .05$, 95% boot CI

[.22, .40], but the relative indirect effect via negative work-related emotions was not significant, $\beta = .01$, $se = .02$, 95% boot CI [-.04, .06].

Consequently, the total effect of the perceived frequency of negative events on work engagement was also significant, $\beta = -.18$, $se = .07$, 95% boot CI [-.33, -.04]. The direct effect of perceived frequency of negative events on work engagement was not significant, $\beta = -.05$, $se = .06$, 95% boot CI [-.16, .07]. The indirect effect via positive work-related emotions was significant, $\beta = -.12$, $se = .04$, 95% boot CI [-.21, -.03], but the indirect effect via negative work-related emotions was not, $\beta = -.02$, $se = .04$, 95% boot CI [-.09, .06].

Overall, the findings suggested that the indirect role of positive and negative work-related emotions in the relationships between perceived frequency of positive and negative events and work engagement differed between the US and the Polish participants. The mediating effects of positive emotions were consistently observed in both samples, thereby supporting hypotheses H1a,b and indicating a robust pattern. However, the indirect effects via negative emotions were specific to the US sample. Consequently, hypotheses H2a,b were only supported in the US sample.

MODERATION BY PSYCHOLOGICAL CAPITAL IN THE US AND POLISH SAMPLES

Next, we added PsyCap as a moderator operating on the paths from the perceived frequency of positive and negative events. We investigated its impact on work engagement (H3a,b) and positive and negative work-related emotions (H4a,b and H5a,b) separately for these two samples. Our theoretical models for both the US and Polish samples were again saturated, they had the best possible fit, $\chi^2 = 0$, $df = 0$, RMSEA = 0, 90% CI [0, 0], SRMR = 0, CFI = 1.00, TLI = 1.00. The results (standardised path coefficients) are presented as Step 2 in Table E4a (the US sample) and in Table E4b (the Polish sample). The main effects of PsyCap on positive and negative work-related emotions and work engagement were significant in both samples. In the US sample, we observed a significant interaction between PsyCap and the perceived frequency of negative events on negative work-related emotions, providing initial support for the hypothesis H5b. In this group, we found no support for the hypotheses H3a,b, H4a,b and H5a. In the Polish participants, we found two significant interactions: one between PsyCap and perceived frequency of negative events on negative work-related emotions, similar to the US sample, supporting the hypothesis H5b, and another between PsyCap and perceived frequency of positive events on positive work-related emotions, which initially supported the hypothesis H4a and occurred only in the Polish sample.

In the following steps, we decomposed the above interactions using the pick-a-point approach and simple-slopes analysis and tested our hypothesised model at three levels of the moderator: mean, 1 *SD* above, and 1 *SD* below the mean (Hayes, 2017). The standardised path

coefficients estimated for three levels of PsyCap are presented in Step 3 in Table E4a (the US sample) and in Table E4b (the Polish sample). With respect to the US sample, the analysis showed that the association between perceived frequency of negative events and negative work-related emotions was stronger for participants with low PsyCap than for participants with medium and high PsyCap, supporting H5b. In the Polish sample, the paths between perceived frequency of negative events and negative work-related emotions as well as between perceived frequency of positive events and positive work-related emotions were stronger in participants with low PsyCap than in participants with medium and high PsyCap. These results support hypotheses H4a and H5b.

Finally, we tested the indirect effects separately for the low, medium, and high PsyCap participants in both samples, again using a bias-corrected bootstrapping procedure with 10,000 samples (Hayes, 2017). The bootstrap results of indirect effects for the low, medium, and high PsyCap are presented in Table E5a (US sample) and in Table E5b (Polish sample). For the US participants regardless the level of PsyCap, the total effect of the perceived frequency of positive events on work engagement was significant and positive. The direct effect of positive events on work engagement was also significant. The indirect effect via positive work-related emotions was significant, while the indirect effect via negative work-related emotions was not. Furthermore, the total effect of perceived frequency of negative events on work engagement was insignificant, nor was the direct effect of negative events on work engagement and the indirect effect via positive emotions. The indirect effect via negative work-related emotions was found to be signifi-

cant and negative, and stronger for high PsyCap participants compared to those low PsyCap.

In summary, in the US sample, we observed a different pattern for high and low PsyCap participants in terms of the indirect effect of perceived frequency of negative events on work engagement through negative work-related emotions. While the indirect effect was negative for both groups, it was stronger for high PsyCap participants than for low PsyCap participants. Furthermore, we observed both direct and indirect effects of perceived frequency of positive events at work on engagement, regardless of PsyCap level.

In the Polish sample, the total, direct and indirect effects of perceived frequency of negative work events on work engagement were insignificant, as was the indirect effect of perceived frequency of positive events on work engagement through negative work-related emotions. Furthermore, the total effect of the perceived frequency of positive events on work engagement was significant and positive regardless of the level of PsyCap. However, the direct effect of perceived frequency of positive events on engagement at work was only significant for high PsyCap participants, while it was not significant for low and medium PsyCap participants. The indirect effect via positive work-related emotions was significant in the whole sample, but weaker for participants with high PsyCap than for those low PsyCap.

In summary, in the Polish sample we observed both direct and indirect effects of the perceived frequency of positive events at work on the engagement for high PsyCap participants, while this effect was exclusively indirect for participants with low PsyCap. While the indirect effect was positive for both groups, it was stronger for low PsyCap participants than for high PsyCap participants.

Table E4a. Results of the Path Analysis for the US sample

| Path | Regression Step 1 (N = 494) | | Regression Step 2 (N = 494) | | Simple slopes analysis Step 3 | | | | | |
|-----------------------|-----------------------------|-----|-----------------------------|-----|-------------------------------|-----|---------------|-----|-------------|-----|
| | β | SE | β | SE | Low PsyCap | | Medium PsyCap | | High PsyCap | |
| | β | SE | β | SE | β | SE | β | SE | β | SE |
| Major paths | | | | | | | | | | |
| PEW → WE | .15*** | .03 | .11*** | .04 | .13* | .06 | .11** | .04 | .10* | .04 |
| NEW → WE | .02 | .03 | .04 | .03 | .03 | .05 | .04 | .03 | .05 | .04 |
| PEm ↔ NEm | -.08* | .03 | .03 | .03 | | | | | | |
| Detailed paths | | | | | | | | | | |
| PEW → PEm | .60*** | .04 | .28*** | .05 | .22** | .07 | .28*** | .05 | .33*** | .05 |
| NEW → PEm | -.23*** | .04 | -.03 | .04 | -.00 | .06 | -.03 | .04 | -.05 | .05 |
| PEm → WE | .72*** | .03 | .67*** | .03 | .67*** | .04 | .67*** | .04 | .67*** | .04 |
| PEW → NEm | -.28*** | .04 | -.07 | .05 | -.08 | .08 | -.07 | .05 | -.05 | .05 |
| NEW → NEm | .59*** | .05 | .45*** | .05 | .55*** | .05 | .45*** | .06 | .35*** | .08 |
| NEm → WE | -.13*** | .03 | -.10** | .03 | -.10** | .03 | -.10** | .03 | -.10** | .03 |
| Main effect of PsyCap | | | | | | | | | | |
| PsyCap → PEm | | | .49*** | .04 | | | | | | |

| Path | Regression Step 1 (N = 494) | | Regression Step 2 (N = 494) | | Simple slopes analysis Step 3 | | | | | |
|----------------------|-----------------------------|----|-----------------------------|-----|-------------------------------|----|---------------|----|-------------|----|
| | | | | | Low PsyCap | | Medium PsyCap | | High PsyCap | |
| | β | SE | β | SE | β | SE | β | SE | β | SE |
| PsyCap → NEm | | | -.33*** | .05 | | | | | | |
| PsyCap → WE | | | .11*** | .04 | | | | | | |
| Moderation by PsyCap | | | | | | | | | | |
| PsyCap x PEW → PEm | | | .05 | .04 | | | | | | |
| PsyCap x PEW → NEm | | | .01 | .04 | | | | | | |
| PsyCap x NEW → PEm | | | -.02 | .04 | | | | | | |
| PsyCap x NEW → NEm | | | -.10** | .04 | | | | | | |
| PsyCap x PEW → WE | | | -.02 | .03 | | | | | | |
| PsyCap x NEW → WE | | | .01 | .03 | | | | | | |
| R ² (WE) | 69.9% | | 70.6% | | | | | | | |

Note. PEW = Perceived frequency of positive events at work; NEW = Perceived frequency of negative events at work; PEm = Positive work-related emotions; NEm = Negative work-related emotions; WE = Work engagement.
 * $p < .05$, ** $p < .01$, *** $p < .001$.

Table E4b. Results of the Path Analysis for the Polish sample

| Path | Regression Step 1 (N = 254) | | Regression Step 2 (N = 254) | | Simple slopes analysis Step 3 | | | | | |
|-----------------------|-----------------------------|-----|-----------------------------|-----|-------------------------------|-----|---------------|-----|-------------|-----|
| | | | | | Low PsyCap | | Medium PsyCap | | High PsyCap | |
| | β | SE | β | SE | β | SE | β | SE | β | SE |
| Major paths | | | | | | | | | | |
| PEW → WE | .09 [†] | .05 | .08 | .06 | .03 | .09 | .08 | .05 | .14* | .06 |
| NEW → WE | -.05 | .06 | -.07 | .06 | -.02 | .09 | -.07 | .06 | -.11 | .07 |
| PEm ↔ NEm | -.20*** | .06 | .02 | .03 | | | | | | |
| Detailed paths | | | | | | | | | | |
| PEW → PEm | .46*** | .07 | .30*** | .05 | .41*** | .08 | .30*** | .06 | .20* | .08 |
| NEW → PEm | -.18** | .07 | -.09 [†] | .05 | -.13 [†] | .06 | -.09 | .06 | -.05 | .08 |
| PEm → WE | .65*** | .05 | .60*** | .06 | .60*** | .06 | .60*** | .06 | .60*** | .06 |
| PEW → NEm | -.36*** | .06 | -.21*** | .05 | -.26** | .10 | -.21*** | .06 | -.17* | .07 |
| NEW → NEm | .57*** | .06 | .48*** | .05 | .59*** | .07 | .48*** | .06 | .37*** | .08 |
| NEm → WE | -.03 | .07 | -.03 | .06 | .03 | .07 | .03 | .07 | .03 | .07 |
| Main effect of PsyCap | | | | | | | | | | |
| PsyCap → PEm | | | .49*** | .05 | | | | | | |
| PsyCap → NEm | | | -.43*** | .05 | | | | | | |
| PsyCap → WE | | | .15* | .06 | | | | | | |
| Moderation by PsyCap | | | | | | | | | | |
| PsyCap x PEW → PEm | | | -.10* | .05 | | | | | | |
| PsyCap x PEW → NEm | | | .05 | .05 | | | | | | |
| PsyCap x NEW → PEm | | | .04 | .05 | | | | | | |
| PsyCap x NEW → NEm | | | -.11* | .05 | | | | | | |
| PsyCap x PEW → WE | | | .06 | .05 | | | | | | |
| PsyCap x NEW → WE | | | -.05 | .05 | | | | | | |
| R ² (WE) | 49.5% | | 50.9% | | | | | | | |

Note. PEW = Perceived frequency of positive events at work; NEW = Perceived frequency of negative events at work; PEm = Positive work-related emotions; NEm = Negative work-related emotions; WE = Work engagement.
[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Table E5a. Mediation Effect at Three Levels of the Moderator (PsyCap) in the US sample

| Effects | Low PsyCap | | | | Medium PsyCap | | | | High PsyCap | | | |
|------------------------------|------------|-----|-----------|-------|---------------|-----|-----------|-------|-------------|-----|-----------|-------|
| | β | SE | BC 95% CI | | β | SE | BC 95% CI | | β | SE | BC 95% CI | |
| | | | Lower | Upper | | | Lower | Upper | | | Lower | Upper |
| PEW → WE | | | | | | | | | | | | |
| Indirect effect via PEm | .15 | .05 | .06 | .25 | .19 | .04 | .12 | .26 | .22 | .04 | .15 | .30 |
| Indirect effect via NEm | .01 | .01 | -.01 | .03 | .01 | .01 | -.003 | .02 | .01 | .01 | -.004 | .02 |
| Joint indirect effect of PEW | .16 | .05 | .07 | .26 | .19 | .04 | .13 | .27 | .23 | .04 | .16 | .30 |
| Direct effect of PEW | .13 | .06 | .006 | .24 | .11 | .04 | .03 | .19 | .10 | .04 | .02 | .17 |
| Total effect of PEW | .29 | .07 | .16 | .42 | .31 | .05 | .22 | .39 | .32 | .04 | .24 | .40 |
| NEW → WE | | | | | | | | | | | | |
| Indirect effect via PEm | -.00 | .04 | -.08 | .07 | -.02 | .03 | -.08 | .04 | -.03 | .03 | -.10 | .03 |
| Indirect effect via NEm | -.06 | .04 | -.09 | -.02 | -.06 | .03 | -.08 | -.02 | -.07 | .04 | -.07 | -.02 |
| Joint indirect effect of NEW | -.06 | .04 | -.14 | .03 | -.06 | .03 | -.13 | -.004 | -.07 | .04 | -.14 | -.001 |
| Direct effect of NEW | .03 | .05 | -.07 | .13 | .04 | .03 | -.03 | .10 | .05 | .04 | -.03 | .12 |
| Total effect of NEW | -.03 | .06 | -.14 | .08 | -.03 | .04 | -.10 | .05 | -.02 | .04 | -.10 | .06 |

Note: $N = 494$; 10,000 bootstrap samples.

SE = standard error; BC = bias corrected; CI = confidence interval.

PEW = Perceived frequency of positive events at work, NEW = Perceived frequency of negative events at work, PEm = Positive work-related emotions, NEm = Negative work-related emotions, WE = Work engagement.

Table E5b. Mediation Effect at Three Levels of the Moderator (PsyCap) in the Polish sample

| Effects | Low PsyCap | | | | Medium PsyCap | | | | High PsyCap | | | |
|------------------------------|------------|-----|-----------|-------|---------------|-----|-----------|-------|-------------|-----|-----------|-------|
| | β | SE | BC 95% CI | | β | SE | BC 95% CI | | β | SE | BC 95% CI | |
| | | | Lower | Upper | | | Lower | Upper | | | Lower | Upper |
| PEW → WE | | | | | | | | | | | | |
| Indirect effect via PEm | .24 | .06 | .14 | .36 | .18 | .04 | .11 | .27 | .12 | .05 | .04 | .22 |
| Indirect effect via NEm | -.01 | .02 | -.05 | .03 | -.01 | .02 | -.04 | .03 | -.00 | .01 | -.04 | .02 |
| Joint indirect effect of PEW | .24 | .06 | .13 | .35 | .18 | .04 | .10 | .27 | .11 | .05 | .03 | .22 |
| Direct effect of PEW | .03 | .09 | -.15 | .21 | .08 | .05 | -.02 | .19 | .14 | .06 | .01 | .26 |
| Total effect of PEW | .26 | .09 | .08 | .45 | .26 | .07 | .13 | .39 | .25 | .08 | .10 | .41 |
| NEW → WE | | | | | | | | | | | | |
| Indirect effect via PEm | -.08 | .04 | -.17 | .01 | -.05 | .03 | -.12 | .01 | -.03 | .05 | -.12 | .06 |
| Indirect effect via NEm | .02 | .04 | -.07 | .11 | .01 | .04 | -.05 | .09 | .01 | .03 | -.04 | .07 |
| Joint indirect effect of NEW | -.06 | .06 | -.18 | .05 | -.04 | .05 | -.14 | .05 | -.02 | .05 | -.13 | .08 |
| Direct effect of NEW | -.02 | .09 | -.20 | .19 | -.07 | .06 | -.17 | .05 | -.11 | .07 | -.25 | .04 |
| Total effect of NEW | -.08 | .10 | -.28 | .10 | -.11 | .06 | -.23 | .01 | -.13 | .09 | -.31 | .03 |

Note: $N = 254$; 10,000 bootstrap samples.

SE = standard error; BC = bias corrected; CI = confidence interval.

PEW = Perceived frequency of positive events at work, NEW = Perceived frequency of negative events at work, PEm = Positive work-related emotions, NEm = Negative work-related emotions, WE = Work engagement.

REVERSED MODEL ANALYSES

One limitation of our study is that our data is cross-sectional. Hence the direction of paths might be seen as arbitrary, as one might claim that work engagement influences emotions, which in turn impact the perception of both positive and negative work events. In the final step of our additional analyses, we examined the reversed causality model, in which we considered work engagement as a predictor, positive and negative work-related emotions as mediators, and the perceived frequency of positive and negative work events as dependent variables. We allowed both mediators to correlate. The model did not fit to data ($\chi^2 = 233.59$, $df = 1$, $p < .001$, $RMSEA = .558$, 90% CI [.499, .619], $SRMR = .094$, $CFI = 0.834$, $TLI = 0.000$).

Moreover, we computed the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) to compare competing models. A lower value of the AIC and BIC indexes indicates a better model fit. Our theoretical model was more parsimonious (AIC = 5157.49, BIC = 5226.76) than the reversed model with work engagement as predictor of the perceived frequency of positive and negative work events (AIC = 7344.69, BIC = 7423.19). Therefore, it seems more adequate to consider the perceived frequency of positive and negative work events as predictors of work engagement with the mediating role of positive and negative work-related emotions. The results for the reversed model (standardised path coefficients) are presented in Table E6.

Table E6. Reversed Model Analyses

| Path | Regression Step 1 | |
|----------------|-------------------|-----|
| | β | SE |
| Major paths | | |
| WE → PEW | .28*** | .05 |
| WE → NEW | .14** | .05 |
| PEm ↔ NEm | -.00 | .02 |
| Detailed paths | | |
| WE → PEm | .79*** | .02 |
| PEm → PEW | .25*** | .05 |
| PEm → NEW | .03 | .05 |
| WE → NEm | -.23*** | .04 |
| NEm → PEW | .06 [†] | .03 |
| NEm → NEW | .48*** | .03 |
| R^2 (PEW) | 24% | |
| R^2 (NEW) | 22% | |

Note. PEW = Perceived frequency of positive events at work, NEW = Perceived frequency of negative events at work, PEm = Positive work-related emotions, NEm = Negative work-related emotions, WE = Work engagement
[†] $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table E7. Summary of hypotheses tested in the whole sample and in the US and Polish samples

| Hypotheses | Whole sample (N = 748) | US sample (n = 494) | PL sample (n = 254) |
|-------------------------------------|------------------------|---------------------|---------------------|
| H1a: Indirect effect PEW → PEm → WE | Supported | Supported | Supported |
| H1b: Indirect effect PEW → NEm → WE | Supported | Supported | Not Supported |
| H2a: Indirect effect NEW → PEm → WE | Supported | Supported | Supported |
| H2b: Indirect effect NEW → NEm → WE | Supported | Supported | Not Supported |
| H3a: Interaction PsyCap x PEW → WE | Not supported | Not supported | Supported |
| H3b: Interaction PsyCap x NEW → WE | Not supported | Not supported | Not supported |
| H4a: Interaction PsyCap x PEW → PEm | Not supported | Not supported | Not supported |
| H4b: Interaction PsyCap x NEW → PEm | Not supported | Not supported | Not supported |
| H5a: Interaction PsyCap x PEW → NEm | Not supported | Not supported | Not supported |
| H5b: Interaction PsyCap x NEW → NEm | Supported | Supported | Supported |