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Promoting Well-Being in the Workplace: The Impact of Empathy, Prosocial Behaviors, and Prospective Thoughts in the Positive Psychology Framework

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by

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"Promoting Well-Being in the Workplace: The Impact of Empathy, Prosocial Behaviors, and Prospective Thoughts in the Positive Psychology Framework"

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BISOUS

Abstract

In today's work environment, prioritizing employee well-being is essential. This thesis explores the role of empathy, prosocial behaviors, and prospective thoughts in enhancing workplace well-being, contributing to the field of positive psychology. By integrating these elements, the research highlights their contributions to positive psychological frameworks like the broaden-and-build theory, individual concepts such as Psychological Capital and character strengths, and positive relationships at the group level. This thesis spans three studies, investigating cognitive, affective, behavioral, and social antecedents of well-being. The first study examines empathy in the workplace, exploring both trait and state levels, as well as its affective and cognitive components, and their impacts on well-being and supportive behaviors. The second study focuses on the effects of observing prosocial behaviors on an observer's well-being and job satisfaction, considering social connectedness and helping pressure as moderators. The third study investigates the impact of positive and negative, as well as social and task-related prospective thoughts during leisure time on employee well-being and work engagement, considering the moderating effect of work centrality. By integrating these constructs, this thesis aims to provide a holistic understanding of the factors that contribute to a supportive and healthy work environment. This dissertation highlights the importance of positive psychological frameworks in fostering employee well-being and organizational health while also providing a nuanced perspective.

Keywords: positive psychology, occupational health, well-being, empathy, prosocial behavior, prospective thoughts, social support.

Résumé

Dans l'environnement de travail actuel, il est essentiel de donner la priorité au bien-être des employés. Cette thèse explore le rôle de l'empathie, des comportements prosociaux et des pensées prospectives dans l'amélioration du bien-être au travail, contribuant ainsi au domaine de la psychologie positive. En intégrant ces éléments, cette recherche met en évidence leurs contributions à psychologie positive tels que la broaden-and-build théorie, les concepts individuels tels que le capital psychologique et les forces de caractère, et les relations positives au niveau du groupe. Cette thèse s'articule autour de trois études portant sur les antécédents cognitifs, affectifs, comportementaux et sociaux du bien-être. La première étude examine l'empathie sur le lieu de travail, en explorant les niveaux de trait et d'état, ainsi que ses deux composantes affective et cognitive, et leurs impacts sur le bien-être et les comportements de soutien. La deuxième étude se concentre sur les effets de l'observation de comportements prosociaux sur le bien-être et la satisfaction au travail de l'observateur, en considérant la connectivité sociale et la pression d'aide comme des modérateurs. La troisième étude examine l'impact des pensées prospectives positives et négatives, ainsi que sociales et liées à la tâche pendant le temps libre, sur le bien-être et l'engagement au travail des employés, en tenant compte de l'effet modérateur de la centralité du travail. En intégrant ces concepts, cette thèse vise à fournir une compréhension holistique des facteurs qui contribuent à un environnement de travail favorable et sain. Cette thèse souligne l'importance des cadres de la psychologie positive pour favoriser le bien-être des employés et la santé de l'organisation, tout en offrant une perspective nuancée.

Mots-clés : psychologie positive, santé au travail, bien-être, empathie, comportement prosocial, pensées prospectives, soutien social.

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Introduction

Aim and Scope

In the contemporary work environment, employee well-being has emerged as a pivotal aspect of sustainable organizational success (Di Fabio, 2017). Defined as a multifaceted concept, well-being encompasses individuals' affective and cognitive evaluations of their lives, characterized by a predominance of positive emotions over negative ones and overall life satisfaction (Diener, 2000). In organizational psychology, well-being is a central concept, reflecting its significant impact on productivity, engagement, and overall job satisfaction (Wright & Cropanzano, 2000). Consequently, my thesis aims to understand and promote workplace well-being by contributing to positive psychology through the exploration of empathy, prosocial behavior, and prospective thoughts.

Understanding these factors is crucial in addressing the pressing need for prioritizing employee well-being, as evidenced by research showing the protective benefits of positive psychological well-being, such as reduced mortality (Chida & Steptoe, 2008). This underscores the importance of cultivating an environment that enhances employee well-being. Recent surveys underscore the necessity of such initiatives; for instance, workplace-related suicides have risen by 33% over the past two decades (Sussell et al., 2023). A substantial portion of the workforce cites mental health issues stemming from work, with the AXA Mind Health Survey[1] (2024) revealing that 77% of employees in Switzerland experiencing mental health challenges attribute them to their workplace environment. Common symptoms include fatigue, sleep disorders, anxiety, stress, and feelings of worthlessness (AXA Mind Health Survey, 2024). These statistics highlight the

[1] https://brandcenter.axa.ch/m/658dcac3ba59a243/original/AXA_Mind_Health_Study_2024_Switzerland_report.pdf

widespread prevalence of well-being challenges in workplaces and emphasize the importance of deeper insights into factors that contribute to fostering a positive work environment.

Purpose of the Thesis

The purpose of this thesis is to explore the role of three factors in enhancing workplace well-being: empathy, prosocial behaviors, and prospective thoughts. This dissertation is rooted in the theoretical framework of positive psychology, which emphasizes the positive aspects of human functioning and well-being (Seligman & Csikszentmihalyi, 2000). By applying principles from positive psychology, I aim to identify factors that promote workplace health and to develop approaches for creating more supportive and healthy work environments. A central aspect of this thesis is its comprehensive investigation of workplace well-being, by examining its antecedents and emphasizing its significance in the workplace. This exploration spans four different levels: cognitive, affective, behavioral, and social antecedents, providing a holistic understanding of these contributing aspects.

We focus on the cognitive antecedent of well-being by examining the impact of prospective thoughts, defined as thoughts about future work (Rutten et al., 2022), which influence well-being by shaping recovery and work engagement. Meta-analyses indicate that positive work-related thoughts predict high well-being and work engagement (Jimenez et al., 2022). Conversely, negative work-related thoughts are associated with decreased well-being, evidenced by studies linking rumination to poor mental health outcomes (Blanco-Encomienda et al., 2020) and negative work-related thoughts to burnout (Jimenez et al., 2022). Building on Rutten et al.'s (2022) research, we explore how positive and negative forms of prospective thoughts affect well-being and work engagement. Our study categorizes prospective thoughts into social and task-related domains to further explore their impacts on well-being. By examining the cognitive component of well-being

through the analysis of prospective thoughts - both positive and negative, and categorized into social and task-related domains - this research contributes to a deeper understanding of how these cognitive processes impact workplace well-being.

On the affective level, our study examines well-being through the lens of observing prosocial behaviors, defined as actions that benefit others (Brief & Motowidlo, 1986), which act as antecedents of well-being by enhancing positive affect and social connections. Research has extensively explored the outcomes of engaging in and receiving prosocial behaviors (Lanaj et al., 2016; Weinstein & Ryan, 2010), yet the impact of observing these behaviors on individuals in the workplace remains underexplored. We explore how observing prosocial behaviors influences the affective aspect of well-being, with witnessing such behaviors might boost positive affect while mitigating negative affect, ultimately contributing to enhanced overall well-being. Indeed, evidence suggest that witnessing acts of kindness and cooperation can induce positive emotional states, contributing to a more positive workplace environment (Chancellor et al., 2016). Through an examination of how observing prosocial behaviors influences the affective aspect of well-being, this study enhances our comprehension of workplace well-being.

The behavioral dimension of this thesis focuses on empathy and its implications for well-being and social support, emphasizing the importance of disentangling its two components: affective and cognitive empathy. Affective empathy involves experiencing emotions that match another's emotional state, while cognitive empathy entails understanding another's emotional state (Brazil et al., 2023; Clark et al., 2019). The Empathy-Altruism hypothesis (Batson et al., 1981) suggests that empathy leads to altruistic behavior and social support, supported by evidence showing that high empathic responses result in helping behaviors (Fultz et al., 1986). However, this study examines both the negative impact of affective empathy on fatigue and the positive

impact of cognitive empathy on providing support, as research indicates that cognitive empathy, unlike affective empathy, is associated with prosocial behavior (Brazil et al., 2023). This study thus examines the behavioral component of well-being by exploring how affective and cognitive empathy influence supportive behavior and their overall impact on workplace well-being.

The social component of well-being is a central theme in all three papers of this thesis, highlighting the critical role of social relations in the workplace. By examining these elements, this thesis underscores the importance of social resources as both a means and an end to improving overall well-being. Social bonds are foundational to human life, and prosocial behaviors are crucial for thriving communities (Crocker et al., 2017). In workplace settings, where over 90% of employees interact with coworkers (Chiaburu & Harrison, 2008), cooperation and helping behaviors facilitate organizational success (Van Kleef & Lelieveld, 2022). Whether recognizing the importance of empathy in fostering deeper connections, the impact of prosocial behaviors in creating a positive work environment, or the role of social prospective thoughts in shaping well-being, this thesis centers on the importance of social relationships for well-being, particularly in the workplace.

In conclusion, this thesis examines the role of empathy, prosocial behaviors, and prospective thoughts in enhancing workplace well-being within the framework of positive psychology. By analyzing the cognitive, affective, behavioral, and social levels of well-being, this study provides a comprehensive understanding of the factors that contribute to a supportive and healthy work environment. The research highlights the positive impact of prospective thoughts on cognitive well-being, the influence of observing prosocial behaviors on affective well-being, and the role of empathy in behavioral well-being, while also emphasizing the importance of social relationships across all three studies. However, this thesis also presents a nuanced perspective by

acknowledging both the positive and negative aspects of empathy, prosocial behaviors, and prospective thoughts. Understanding both the benefits and potential drawbacks of these factors is crucial for a complete understanding of workplace well-being. Overall, this nuanced approach enriches the discourse on positive psychology, providing deeper insights for improving workplace well-being and organizational health.

Positive psychology

Occupational Positive Psychology is a field devoted to enhancing both individual and organizational effectiveness, and quality of life through the scientific study of positive experiences and traits in the workplace (Donaldson & Ko, 2010). A review of psychological research before the advent of positive psychology, a field initiated at the beginning of the century, revealed that negative emotions were reported fourteen times more frequently than positive emotions (Myers, 2000), highlighting the traditional focus of classical psychology on negative aspects of human experience. In contrast, positive psychology focuses on the conditions and processes that foster flourishing and optimal functioning in individuals, groups, and institutions (Cameron et al., 2004). According to Seligman and Csikszentmihalyi (2014), positive psychology at the subjective level focuses on valued experiences such as well-being, hope, and flow. At the individual level, it encompasses positive traits like courage, interpersonal skill, forgiveness, and gratitude. At the group level, it includes civic virtues and institutions that promote better citizenship through responsibility, altruism, civility, tolerance, and work ethic (Cameron et al., 2004).

While fostering these virtues, positive psychology does not deny life's negative aspects but instead aims to study the ways people experience joy, show altruism, and create healthy environments, addressing the full spectrum of human experience. It argues that understanding these positive elements is crucial on their own, not just as buffers against life's problems and stressors (Gable & Haidt, 2005). In this context, positive psychology specifically focuses on human resource strengths and psychological capacities that are crucial for performance improvement in today’s workplace settings (Meyers et al., 2013). Examples of these capacities include hope, optimism, resilience, and self-efficacy, collectively known as Psychological Capital (Luthans et al., 2007). Furthermore, concepts such as character strengths and positive relationships

shape individual and group behaviors and attitudes (Wong, 2011). These key concepts illustrate how positive psychology provides a comprehensive framework for enhancing well-being in various aspects of life and work.

This thesis aims to integrate empathy, prosocial behaviors, and prospective thoughts into a cohesive narrative, demonstrating the profound impact of occupational positive psychology on workplace environments. It examines these elements to illustrate their contributions to positive psychological frameworks, notably the broaden-and-build theory (Fredrickson, 2001). At the individual level, the focus is on concepts like Psychological Capital (Luthans et al., 2007), and character strengths, while at the group level, the emphasis is on positive relationships (Cameron et al., 2004). This approach highlights the impact of positive psychology on individual and group behaviors, demonstrating its ability to transform workplace cultures and enhance well-being.

Broaden-and-Build theory

In the realm of occupational positive psychology, the broaden-and-build theory proposed by Fredrickson (2001) provides a framework for understanding how positive emotions contribute to human growth and well-being. This theory posits that positive emotions do not solely enhance an individual's momentary feelings of happiness but also expand their capacity to build enduring personal resources, both psychological and physical (Fredrickson, 2001). Such resource development is evident in various contexts, such as children developing survival skills through playful activities (Dolhinow, 1987), forming social bonds (Aron et al., 2000), and enhancing intellectual abilities (Sherrod & Singer, 2012). These resources are essential for navigating later life challenges, underscoring the long-term benefits of fostering positive emotions. For organizations, this underscores the importance of building positive workplace environments to support a thriving workforce. Each study within this thesis will be examined through the lens of

the broaden-and-build theory, highlighting how empathy, prosocial behaviors, and prospective thoughts contribute to building a healthy and thriving workplace.

The broaden-and-build theory explains that while negative emotions tend to narrow an individual's momentary thought–action repertoire for immediate reaction, positive emotions broaden this same repertoire, enabling individuals to draw upon a wider array of thoughts and actions (Fredrickson, 2001). Experiencing positive emotions leads to a wider scope of visual attention (Fredrickson & Branigan, 2005), greater openness to constructive feedback (Raghunathan & Trope, 2002), and an expanded repertoire of possible actions (Fredrickson & Branigan, 2005). This broadened attention and thinking allows individuals to think more creatively and flexibly, facilitating better problem-solving and coping strategies. This theory also introduces the "undoing hypothesis" (Fredrickson et al., 2000) which posits that positive emotions can serve as efficient buffers to negative emotions. Imagine you're feeling frustrated and hopeless while working on a manuscript, but then a colleague tells a hilarious story about intestinal problems while running. The laughter and joy you feel replace your frustration because those emotions cannot exist together, they are antinomic.

Moreover, this buffering of negative emotions helps individuals recover more quickly from stressors (Fredrickson & Levenson, 1998). Indeed, positive emotions counteract the physiological effects of negative emotions, leading to a faster return to baseline levels of arousal, thereby enhancing resilience (Fredrickson et al., 2000). According to the build hypothesis, the second part of the broaden-and-build theory, positive emotions help individuals grow and build valuable personal resources over time. Psychological resilience, an enduring personal resource, develops through regular experiences of positive emotions, which broaden attention and cognition, thereby enhancing coping resources (Tugade & Fredrickson, 2000). This theory suggests that cumulative

positive experiences create a reservoir of resilience, enabling individuals to cope more effectively with future adversities and maintain well-being. These processes trigger upward spirals, where initial gains in resilience lead to increased positive emotions, further enhancing health, resilience, and fulfillment (Fredrickson & Joiner, 2002).

In summary, the broaden-and-build theory illustrates how positive emotions expand individuals' thought–action repertoires (Fredrickson & Branigan, 2005), counteract negative emotions (Fredrickson et al., 2000), foster psychological resilience (Tugade & Fredrickson, 2000), and initiate upward spirals leading to improved well-being (Fredrickson & Joiner, 2000). By examining the functional benefits of positive emotions through the broaden-and-build theory, this thesis highlights how empathy, prosocial behaviors, and prospective thoughts foster well-being in the workplace.

Broaden-and-Build theory and Empathy

To foster well-being in a world where 90% of people experience at least four emotions daily (Wilhelm et al., 2004), the importance of empathy in the workplace becomes clear. Empathy is characterized by the capacity to share and understand the emotional states of others (Clark et al., 2019). Often, empathy is viewed as a response to negative emotions, providing support and alleviating distress (e.g., Baston et al., 1981). However, empathy can also be positive and create positive emotions. Although my research project on empathy covered both its negative and positive dimensions, I will concentrate on the positive aspects in line with the broaden-and-build theory (Fredrickson, 2001). This theory is particularly insightful for understanding empathy's role, especially in terms of positive empathy, which entails understanding and sharing others' positive emotions (Morelli et al., 2015). Positive empathy not only heightens one's own positive emotions but also contributes to an overall increase in life satisfaction and well-being (Ganegoda & Bordia,

2019). For example, witnessing or learning about others' positive experiences can elicit vicarious joy that enhances one's own emotional state (Morelli et al., 2015).

Moreover, positive empathy in the workplace leads to happiness in response to coworkers' successes, contrasting with feelings of envy (Ganegoda & Bordia, 2019). This supports the "undoing hypothesis" (Fredrickson et al., 2000), suggesting that positive emotions can buffer against negative emotions. Experiencing positive empathy fosters prosocial behaviors (Telle & Pfister, 2016), sustaining or enhancing positive emotions and encouraging further acts of kindness and support within the organization (Snippe et al., 2018). This cycle promotes individual well-being and cultivates a positive organizational climate, contributing to enhanced job satisfaction and broader organizational citizenship behaviors (Joireman et al., 2006).

The frequent experience of positive empathy has significant implications for organizational health. By fostering an environment rich in positive emotions, positive empathy enhances interpersonal relations and overall workplace morale (Weiss & Cropanzano, 1996). According to the broaden-and-build theory, these positive emotions expand individuals' thought-action repertoires and build enduring personal and social resources (Fredrickson, 2001). However, it is important to acknowledge that empathy also has its challenges. While empathy in response to others' negative emotions can foster deep emotional connections and provide support (Batson et al., 1981), it can also lead to emotional exhaustion (Cameron et al., 2019). Balancing both positive and negative empathy is crucial. Therefore, promoting positive empathy in the workplace aligns with positive psychology principles and can improve the organizational environment, enhancing both productivity and well-being.

Broaden-and-Build theory and Prosocial Behaviors

Improving the organizational environment through empathy promotes prosocial behaviors, which are essential for fostering a collaborative and supportive work environment. When an individual shows a positive emotion, such as happiness, and another person perceives and shares in that emotion, it results in positive empathy (Morelli et al., 2015). This shared positive affect motivates individuals to increase and prolong the positive emotions, as experiencing positive feelings is a common pursuit (Augustine et al., 2010). Consequently, when opportunities to help others arise, those experiencing positive empathy are more likely to engage in prosocial behaviors, as these acts enhance positive emotions (Rosenhan et al., 1981). This cycle of empathy and prosocial behavior fosters a supportive environment, enhancing workplace well-being and aligning with the broaden-and-build theory, thereby promoting a supportive and healthy organizational culture.

Promoting a supportive work environment by exploring prosocial behaviors through the broaden-and-build theory offers a nuanced understanding of their impact on well-being and resource development (Fredrickson, 2001). Engaging in prosocial behaviors has been linked to increased performance (Shukla & Kark, 2020), higher well-being (Hui et al., 2020; Curry et al., 2018), job satisfaction (Grant & Sumanth, 2009), and fostering cooperation and trust among colleagues (Brief & Motowidlo, 1986), as positive emotions from these behaviors broaden individuals' thought-action repertoires and help build new resources. For a fun example, Arnocky et al. (2016) found that participants who scored higher on altruism reported having more sex partners and having sex more often, illustrating the positive impact of prosocial behaviors on well-being and social connection. Not only does engaging in prosocial acts have benefits, but observing prosocial behaviors also evokes profound emotional experiences such as awe and elevation, which

are associated with enhanced well-being and increased satisfaction (Van Kleef & Lelieveld, 2022). Research by Algoe and Haidt (2009) shows that emotions like elevation, arising from witnessing prosocial acts, stimulate affiliative actions, which enriches relationships and personal growth, aligning with positive emotions in Fredrickson's broaden-and-build theory (2001) encouraging behaviors that foster social and emotional resources.

People who experienced elevation were more likely to engage in prosocial behaviors (Schnall et al., 2010). This is linked to the "feel-good, do-good" phenomenon, where being in a positive mood prompts individuals to engage more frequently in helping behaviors (Rosenhan et al., 1981). Conversely, the "doing good–feeling good" effect indicates that helping others can significantly elevate the mood and satisfaction of the helper (Glomb et al., 2011). This reciprocal relationship between prosocial actions and positive emotions creates an upward spiral, as described in Fredrickson's broaden-and-build theory (2001). This virtuous cycle of "doing good" and "feeling good" reinforces itself: engaging in or observing prosocial behaviors leads to positive emotions, which in turn encourage further prosocial actions (Aknin et al., 2018). Engaging in prosocial behaviors not only fulfills individual social and psychological needs but also promotes an overarching sense of well-being (Varma et al., 2023). This supports Fredrickson's assertion that positive emotions accrued from such behaviors can build enduring personal and communal resources.

Observing prosocial behaviors in the workplace, guided by the broaden-and-build theory, significantly contributes to a positive organizational culture. These observations evoke emotional experiences such as awe and elevation, enhancing emotional states and stimulating ongoing prosocial behavior. This reciprocal relationship fosters an environment of support, cooperation, and trust, thereby enhancing organizational health and individual satisfaction. By making prosocial

behaviors visible and acknowledged, organizations can leverage the positive emotions generated, as outlined in the broaden-and-build theory, to create a supportive and resilient workforce.

Broaden-and-Build theory and Prospective thoughts

The relevance of prospective thoughts in enhancing workplace well-being and fostering such a workforce is underscored by Fredrickson's broaden-and-build theory (Fredrickson, 2001). When these future-oriented thoughts are imbued with optimism and hope, they can replenish or expand employees' energetic resources, enhancing their overall well-being (Luthans et al, 2010). Positive prospective thoughts encourage behaviors that lead to personal growth and resilience, aligning with Fredrickson's broaden-and-build theory. For example, employees who anticipate future success are more likely to engage in proactive coping strategies and seek social support, rather than succumbing to stress or adversity (Watkins, 2008). These positive thoughts correlate with higher levels of day-to-day positive affect and improved well-being (Eichberger et al., 2021). Furthermore, positive emotions associated with positive prospective thoughts can enhance parasympathetic nervous system regulation (Lopez & Snyder, 2009), crucial for maintaining heart rate variability and promoting relaxation and recovery (Loft & Cameron, 2014). This physiological benefit demonstrates how positive emotions not only influence psychological resilience but also impact physical health, creating a holistic cycle of well-being that replenishes an individual's energetic resources (Rutten et al., 2022).

Positive prospective thoughts enhance an individual's current well-being and their capacity to thrive in future endeavors, as explained by the broaden-and-build theory. These thoughts lead to broadened thought-action repertoires, which help develop essential personal resources like social, physiological, and cognitive assets (Fredrickson, 1998; Fredrickson, 2001). This creates a

virtuous cycle where positive prospective thoughts continually boost personal resources and overall well-being.

Psychological Capital

In today's organizational environment, the construct of Psychological Capital has emerged as a pivotal framework for understanding how employees can leverage these resources to thrive through work challenges. Developed by Luthans et al. (2007), Psychological Capital consists of four key components: hope (redirecting paths to work goals), resilience (bouncing back from setbacks), self-efficacy (confidence in one's ability to succeed), and optimism (positive outlook on the future). Each component contributes to an employee's psychological strength through cognitive, affective, conative, and social mechanisms, leading to improved workplace happiness and overall well-being (Youssef-Morgan & Luthans, 2015).

Cognitively, Psychological Capital, through its hope and optimism components, fosters positive appraisals of situations and success probabilities, which boost effort, motivation, and perseverance (Luthans et al., 2007). By enabling employees to envision successful outcomes and develop adaptive strategies, Psychological Capital enhances problem-solving capacities and resilience (Newman et al., 2014). Affectively, the positive states generated by Psychological Capital broaden individuals' thought-action repertoires, aiding in the development of resources (Fredrickson, 2001). For example, optimism and resilience improve an individual's ability to cope with stress and recover from setbacks, leading to greater well-being and job satisfaction (Youssef-Morgan & Luthans, 2015). Conatively, Psychological Capital promotes intentional actions and a sense of control over one's work environment through self-efficacy and hope (Bandura, 2012). These components empower employees to take initiative and persist in the face of challenges, reinforcing their capacity for workplace success (Luthans et al., 2007). Socially, the positivity

generated by Psychological Capital enriches interpersonal relationships and develops professional connections, creating a more connected and supportive workplace (Dutton & Ragins, 2009).

Consequently, Psychological Capital is an essential framework for comprehending how positive psychological resources enhance employee well-being and organizational health. In particular, understanding the connection between Psychological Capital and empathy is crucial for enhancing occupational well-being. Resilience, a component of Psychological Capital, helps individuals manage stress and maintain emotional stability (Youssef-Morgan & Luthans, 2015), essential for handling empathetic demands in the workplace. Additionally, Psychological Capital shapes how employees perceive and interact with their future, fostering prospective thinking and thus workplace well-being. Psychological Capital's positive orientation, especially through positive prospective thoughts, encourages goal setting, persistence, and the ability to view challenges as opportunities (Luthans et al., 2007). By integrating Psychological Capital with empathy and prospective thinking, organizations can cultivate a proactive and adaptive culture, ultimately enhancing overall organizational health.

Psychological Capital and Empathy

Understanding the connection between Psychological Capital and empathy provides valuable insights into enhancing organizational health. While empathy in response to others' negative emotions can foster deep emotional connections and provide support, it can also lead to emotional exhaustion (Lin et al., 2022). To mitigate this, the resilience component of Psychological Capital enables people to cope with stress and stay emotionally stable, which is important for managing empathy in the workplace (Youssef-Morgan & Luthans, 2015). Empathy can either enhance stress resilience through empathetic concern or diminish it via empathetic distress (Cameron et al., 2019). Properly managing empathy, supported by the resilience

component of Psychological Capital, helps workers maintain clear emotional boundaries and prevent empathetic distress (Kinman & Grant, 2010). This combination allows employees to foster positive interactions while safeguarding their emotional well-being.

Furthermore, the cognitive aspect of empathy involves understanding others' emotions without becoming emotionally overwhelmed. This is reinforced by high self-efficacy, a component of Psychological Capital, which enables employees to feel confident in their ability to provide support (Bandura, 2012) while avoiding empathetic distress, thus maintaining their own well-being. Additionally, the optimism facet of Psychological Capital also plays a role in enhancing empathy in the workplace by shaping how employees perceive and react to the emotional states of others. Optimistic employees are more likely to view empathetic interactions positively, seeing challenges as opportunities for growth and connection rather than sources of stress (Youssef-Morgan & Luthans, 2015). By integrating Psychological Capital and empathy, organizations can create a supportive work environment that enhances employees' ability to handle emotional demands and maintain their well-being (Luthans et al., 2007). Therefore, fostering Psychological Capital alongside empathy can significantly enhance how employees perceive and interact within the workplace, leading to improved well-being and organizational effectiveness.

Psychological Capital and Prospective Thoughts

Psychological Capital also influences how employees perceive and interact with their future, making it crucial in understanding workplace well-being and prospective thinking. Psychological Capital fosters positive appraisals of past, present, and future circumstances, promoting an optimistic, adaptive, and resilient mindset (Luthans et al., 2007). The prospective component of Psychological Capital, particularly through hope and optimism, enhances the capacity to set future-oriented goals and develop pathways to achieve them. This ability is essential

in navigating the uncertainties inherent in work situations (Casper & Sonnentag, 2020), as it empowers individuals to envision multiple avenues for achieving goals and to persist despite setbacks (Snyder, 2000). For instance, an employee with high hope anticipates positive outcomes and actively plans and adapts strategies to ensure these outcomes, thereby enhancing their sense of control and proactive engagement in the workplace.

Psychological Capital also plays a significant role in countering the negative bias that often clouds judgment and decision-making. By promoting an optimistic explanatory style - attributing positive events to internal and stable causes, and negative events to external and specific ones (Carver & Scheier, 2002) - it helps maintain a focus on positive outcomes and possibilities. This positive outlook motivates continued effort and engagement, buffering against the demoralization that can result from repeated challenges or setbacks. Furthermore, the resilience component of Psychological Capital enables individuals to recover from setbacks more effectively, using their experiences as a basis for growth (Newman et al., 2014). Enhanced by both positive retrospective and prospective appraisals, resilience helps retain beneficial memories and lessons from past experiences, strengthening future responses to challenges (Hartmann et al., 2020). By fostering hope, resilience, self-efficacy, and optimism, Psychological Capital improves workplace well-being, influencing how employees perceive their environment and prepare for the future.

Character Strengths

Character strengths, as studied in positive psychology, play a role in shaping this workplace perception, thereby improving personal well-being and workplace efficiency (Donaldson et al., 2019). Character strengths are defined as natural behaviors, thoughts, or feelings that a person excels in and enjoys, which help them function optimally and achieve valuable outcomes (Quinlan et al., 2012). Recognizing and developing character strengths in the workplace, such as those

outlined in the Values in Action (VIA)[2] classification – which includes twenty-four strengths such as love of learning, honesty, and kindness - allow individuals to identify and understand their core strengths (Peterson & Seligman, 2004). This understanding empowers employees to harness their innate capabilities and align their work roles with these strengths, thereby enhancing job performance and satisfaction (Harzer & Ruch, 2012).

Research has shown that interventions focused on character strengths can lead to profound improvements in various aspects of workplace dynamics, such as well-being and job satisfaction, while also demonstrating more helping behaviors and fewer counterproductive ones (e.g., Miglianico et al., 2020). For instance, employees who identified and developed plans to use their strengths at work enhanced their performance and found greater meaning in their roles (Harzer & Ruch, 2012). Employees actively encouraged to use their strengths at work show lower levels of stress (Van Woerkom & Meyers, 2015), while experiencing higher levels of vitality, flow, and engagement at work (Lavy & Littman-Ovadia, 2017; Van Woerkom & Meyers, 2015).

Character strengths, as explored in positive psychology, enhance individual well-being by leveraging employees' natural capacities; recognizing and developing these strengths fosters a more positive and productive organizational culture (Donaldson et al., 2019). By engaging their strengths, employees contribute to a supportive work environment that encourages positive interpersonal relations (Miglianico et al., 2020). Character strengths, particularly when combined with empathy, play a crucial role in achieving and sustaining both personal and organizational performance. This investigation underscores the importance of a strengths-based approach to

[2] https://www.viacharacter.org

employee development and management, ultimately fostering a competent, engaged, and deeply connected workforce (Miglianico et al., 2020; Harzer & Ruch, 2012).

Character Strengths and Empathy

The integration of character strengths with empathy within the workplace not only enhances individual well-being and performance but also fosters a connected and engaged workforce (Westman et al., 2013). Research suggests that character strengths such as kindness, teamwork, and fairness promote empathy, leading to an environment where employees are more engaged, satisfied, and efficient as well as contributing to a supportive work environment (Miglianico et al., 2020). Character strengths significantly influence how employees perceive and react to their environment and colleagues, promoting a workplace culture that emphasizes positive interpersonal relations and empathic interactions. By leveraging their strengths, employees can build stronger relationships, work more effectively in teams, and contribute to a positive and productive organizational culture.

Moreover, the "Pollyanna hypothesis" (Boucher & Osgood, 1969) suggests that focusing on positive ideas and events is more beneficial than concentrating on negative aspects. This aligns with the concept of positive prospective thoughts and highlights the association between empathy and character strengths. Positive work reflection is linked to lower exhaustion and higher affective well-being by triggering positive emotions and enhancing their effects through savoring (Bryant, 1989). Additionally, positive emotions accelerate recovery from negative emotional arousal, suggesting that positive work reflection can reduce negative affect (Fredrickson et al., 2000), thus supporting the Pollyanna hypothesis.

Building on this, by emphasizing positive thoughts and strengths such as empathy, employees can experience stronger emotional resonance with positive events and improved

memory retention. This leads to a more optimistic outlook on future events (Westman et al., 2013). This positive focus enhances feelings of self-other overlap (Galinsky et al., 2005), promoting empathy among coworkers. Increased empathy facilitates better understanding and sharing of positive emotional states, resulting in a positive crossover of emotions (Westman et al., 2013). Employees with high state empathy are thus more likely to experience and contribute to positive affect within the workplace, reinforcing the benefits of character strengths in creating a cohesive and supportive work environment. This synergy between character strengths, positive emotional exchanges, and a focus on positive thoughts allows organizations to build productive and harmonious workplace cultures, fostering an environment where employees feel valued, understood, and more engaged.

Positive Relationships

In positive psychology, fostering such harmonious workplace cultures through positive relationships marked by trust, respect, and open communication (Dutton & Ragins, 2009) is essential for providing resources and enhancing employee well-being and productivity (Van Kleef & Lelieveld, 2022). These relationships offer not only informational and material support but also crucial social resources, such as goal support and access to networks of knowledge and contacts (Ciarrochi et al., 2019). This highlights the importance of prosocial behavior - actively contributing to others' well-being (Brief & Motowidlo, 1986) - as a key component of professional success. Positive workplace relationships create a cycle of positive affect and prosocial behavior that benefits both givers and receivers. The "doing good–feeling good" effect indicates that helping others can significantly elevate the helper's mood and satisfaction (Glomb et al., 2011), and this reciprocal effect, known as the "feel-good, do-good" phenomenon, shows that being in a positive mood encourages individuals to engage more in helping behaviors (Rosenhan et al., 1981).

Additionally, bidirectional associations between prosocial behaviors and positive affect illustrate a reinforcing cycle that enhances both others' and one's own well-being (Snippe et al., 2018).

In my thesis, all three papers highlight the importance of positive relationships in cultivating an organizational culture that supports well-being and a prosocial workplace. By investing in the development and maintenance of positive interpersonal relationships, organizations can significantly enhance employee engagement, job satisfaction, and overall performance (Bolino & Grant, 2016). My thesis specifically examines the role of positive relationships in the workplace, focusing on how empathy and prosocial behaviors, grounded in positive psychology principles, contribute to well-being. Positive relationships provide essential emotional and psychological support, which are crucial for task performance and overall well-being (Cameron et al., 2004). The interaction between empathy and prosocial behaviors fosters a supportive and resilient organizational culture, reinforcing team collaboration and promoting mutual support (Batson et al., 2007; Morelli et al., 2014). This focus cultivates a supportive work environment and lays the foundation for sustained success through a connected workforce.

Positive Relationships and the Interplay between Empathy and Prosocial Behaviors

To foster a supportive work environment, the importance of positive workplace relationships is emphasized, with a particular focus on the interplay between empathy and prosocial behaviors. This exploration is based on the understanding that social interactions and the networks they create - referred to as social capital - are essential for accessing resources that enhance task performance and organizational success (Cameron et al., 2004). Positive relationships foster social capital, which involves the flow of resources, information, and influence (Bolino et al., 2002), and also enhance emotional support among employees (Cameron et al., 2004). Empathy strengthens these relationships by helping colleagues connect deeply, sharing

emotions, and understanding each other's experiences (Batson et al., 2007). This empathic connection nurtures prosocial behaviors in the workplace (Brief & Motowidlo, 1986), such as assisting a colleague with exam preparation or offering a hug during stressful times. These behaviors are not only altruistic but also reinforce positive team dynamics, creating a cycle of mutual support and positive affect (Riess, 2017).

Positive relationships, strengthened by empathy and prosocial behaviors, significantly enhance organizational health. Empathetic employees are more inclined to support their colleagues, thereby improving emotional well-being for both themselves and others (Morelli et al., 2014). Empathy fosters positive social relationships by increasing perceptions of social closeness and building relationship resources (Gable et al., 2006). Moreover, in positive relationships characterized by empathy and prosocial behaviors, emotions are mainly experienced, expressed, and regulated in response to others, making these functions inherently social (Sels et al., 2021). This aligns with Fredrickson's broaden-and-build theory (2001), which posits that positive emotions create resources by enhancing the quality of interpersonal relationships, fostering social connectedness, and encouraging prosocial behavior. Specifically, expressing positive emotions often signals affiliation, projecting warmth and a willingness to cooperate (Sels et al., 2021). This bidirectional relationship between positive emotions and prosociality shows that positive emotions predict increases in prosocial behavior, which in turn fosters subsequent positive emotions (Snippe et al., 2018). Indeed, being thanked for helping a colleague has been shown to increase work engagement the following day, reinforcing the benefits of positive emotion expression in the workplace (Lee et al., 2019).

In summary, my thesis emphasizes how positive relationships, empathy, and prosocial behaviors are fundamental in promoting individual well-being and fostering a thriving organizational culture.

Aims and Contributions

This thesis investigates what contributes to a supportive and successful work environment by examining the cognitive, affective, behavioral, and social antecedents of well-being. It argues how positive prospective thoughts enhance cognitive well-being, observing prosocial behaviors boosts affective well-being, and empathy is crucial for behavioral well-being. The importance of social relationships in the workplace is also emphasized across all three papers. By integrating empathy, prosocial behaviors, and prospective thoughts, this work illustrates the significant impact of positive psychology on workplace environments. It shows how these elements support positive psychological frameworks, particularly the broaden-and-build theory (Fredrickson, 2001), focusing on Psychological Capital and character strengths at the individual level, and positive relationships at the group level. The goal is to identify factors that enhance workplace health and develop methods for creating more supportive and healthy work environments. This thesis enriches the discourse on positive psychology and offers valuable insights for improving workplace well-being and organizational health.

Although this thesis is grounded in positive psychology, my three research papers offer a more nuanced perspective, focusing on both the positive and negative aspects of these constructs. While empathy can foster altruism and support, it also has downsides due to its sensitivity to others' emotions. Affective empathy, which involves feeling others' emotions, may lead to exhaustion if triggered by negative emotions, whereas cognitive empathy, which involves understanding others' emotions, can buffer against such distress. Observing prosocial behaviors can enhance well-being through increased positive affect but may also lead to stress when there is a perceived pressure to help. Positive prospective thoughts generally improve well-being and engagement, but negative thoughts can cause fatigue and stress. Thus, my dissertation underscores the benefits of leveraging

positive psychology while also revealing the complexity of these constructs, demonstrating that their impact on well-being is multifaceted and context-dependent. Recognizing both the advantages and potential drawbacks of these factors is essential for a comprehensive understanding of workplace well-being. By offering a nuanced perspective, this thesis contributes to a deeper insight into creating healthier and more supportive work environments.

Presentation of papers

Research Project 1: Empathy in the Workplace

In the initial phase of my research, I explored the dimensions of empathy within the workplace, emphasizing its dual aspects: affective empathy (feeling others' emotions) and cognitive empathy (understanding others' emotions; Clark et al., 2019). Despite its significant impact on individual well-being and organizational outcomes, research often overlooks the distinction between these two types of empathy. Traditionally seen as a stable trait, empathy actually encompasses both enduring traits and fluctuating states. Hence, we investigated empathy by distinguishing between its affective and cognitive components and considering it as both a trait and a state.

Our research aims to offer a more nuanced view of empathy, highlighting its benefits for interpersonal behavior while also investigating its potential downsides, such as its association with reduced well-being. Previous research suggests that both cognitive and affective empathy positively influence supportive behavior (Longmire & Harrison, 2018). However, cognitive empathy may be more effective in fostering support by understanding emotions, whereas affective empathy might lead to emotional overload. Indeed, affective empathy is psychologically taxing and can lead to emotional exhaustion, as it involves regulating negative emotions, which depletes psychological resources (Cameron et al., 2019). This type of empathy can thus cause feelings of being overwhelmed and personal distress. In contrast, cognitive empathy allows for understanding others' emotions without sharing them, thereby reducing personal distress (Decety & Cowell, 2014).

We hypothesized that affective empathy might lead to emotional overwhelm due to heightened sensitivity to others' negative emotions, while cognitive empathy might offer emotional

distance, optimizing positive behavioral reactions and safeguarding well-being. To examine these differential outcomes, particularly in the context of observing workplace relationship conflicts, we utilized the DIAMONDS model (Rauthmann et al., 2014) and Trait Activation Theory (Tett & Burnett, 2003). These frameworks allowed us to explore how empathy responds to situational cues, shaping behavioral reactions like social support and emotional reaction like fatigue. We present findings from two daily diary studies: Study 1 focused on trait empathy, and Study 2 examined both trait and state empathy.

Research Project 2: Observing Prosocial Behaviors

My second research project examined the impact of observing prosocial behaviors on an individual's well-being and job satisfaction. This study fills a significant gap in existing literature by focusing on the observers of prosocial behaviors, rather than the recipients or actors. Preliminary evidence suggests that employees who observe prosocial behavior experience increased well-being (Chancellor et al., 2016). Our study aims to pinpoint the specific effects of solely observing prosocial behaviors by controlling for experienced prosocial behaviors.

Observing prosocial behaviors often leads to positive interpersonal relationships, enhancing well-being and job satisfaction (Varma et al., 2023; Bolino & Grant, 2016). Witnessing acts of kindness and cooperation induces positive emotional states, and the perceived availability of social support, strengthened by observing prosocial behavior, further boosts individual well-being and job satisfaction. The study aims to uncover both the positive and negative effects of observing prosocial behavior, considering how social context influences these outcomes.

Building upon the understanding of how observing prosocial behaviors influences individual well-being and job satisfaction, this study examines the pivotal role of the social context in shaping these effects. To achieve this, we introduce social connectedness and helping pressure

as moderators to explore their influence on the impact of observed prosocial behavior. On the positive side, social connectedness can enhance the well-being benefits of prosocial behaviors and buffers against potential negative impacts (Hutcherson et al., 2008). However, helping pressure can lead to negative consequences by creating an obligation to consistently aid coworkers, increasing stress and reducing well-being (Bolino et al., 2015). This pressure fosters a culture of regular altruistic actions driven by both formal and informal rewards but also creates a sense of obligation that can harm personal well-being. Observing prosocial actions motivated by external pressures can diminish their positive perception and value (Berman & Silver, 2022). Therefore, this study examines the boundary conditions of observing prosocial behaviors, focusing on both positive and negative aspects. Recognizing the significance of daily fluctuations in prosocial behaviors (Lanaj et al., 2016), we employ a multilevel analysis to capture within-person variations and their outcomes (Ohly et al., 2010), drawing findings from a two-week diary study.

Research Project 3: Prospective Thoughts during Leisure Time

In the third phase of my research, I investigated the impact of social and task-related prospective thoughts during leisure time on employee well-being. This study aligns with positive psychology's focus on work engagement and recognizes the differential effects of prospective thoughts. By distinguishing between positive/negative and social/task-related thoughts, we aim to discern their relative importance on well-being and job attitudes. The inclusion of work centrality as a moderating factor acknowledges individual differences in how work-related thoughts affect well-being and engagement.

While prior research has focused mainly on retrospective thoughts, this study emphasizes the significance of prospective thoughts involving future work scenarios (Rutten et al., 2022). Prospective thoughts, like retrospective thoughts, can be either positive or negative, impacting

recovery and well-being differently. Positive future thoughts can expand employees' energetic resources, consistent with Fredrickson's broaden-and-build theory (2001), which states that positive emotions broaden thought and action repertoires. Conversely, negative emotions narrow these repertoires, leading to quick actions. Positive prospective thoughts can lead to adaptive behaviors and recovery, while negative thoughts often result in avoidance behaviors.

Building on the effects of prospective thoughts' valence, we explore their differential impact on well-being and work engagement. Conservation of resources theory (Hobfoll, 1989) and prospect theory (Kahneman & Tversky, 1979) propose that the impact of resource loss and anticipated negative outcomes on well-being is greater than that of resource gain and anticipated positive outcomes. Negative work-related thoughts have a stronger association with decreased well-being compared to the boost positive thoughts provide (Jimenez et al., 2022), suggesting that negative experiences have a more significant impact. Thus, we believe that negative prospective thoughts will have a more substantial effect on well-being than positive ones, aligning with the 'bad is stronger than good' adage (Baumeister et al., 2001). Conversely, we propose that positive thoughts will have a stronger effect on work engagement than negative thoughts. Work engagement, which can be triggered by positive work-related thoughts (Jiang & Johnson, 2018), is more strongly related to positive thoughts than negative ones (Jimenez et al., 2022).

We also differentiate between task-related and social-related prospective thoughts, as previous research indicates these distinct types of thoughts are related to different outcomes (Weigelt et al., 2019). Task-related thoughts pertain to professional tasks and responsibilities, while social-related thoughts involve interactions with colleagues and clients. Most research on work-related thoughts has either not distinguished the content or focused exclusively on task-related thoughts. Distinguishing between these types is crucial because they may influence well-

being and engagement in distinct ways, with social stressors being the most impactful on daily mood changes (Bolger et al., 1989). By adopting a daily lens through a diary study, we capture the fluctuating nature of prospective thoughts – both positive and negative as well as social and task-related – and their impact on well-being and work engagement, using multilevel analysis for a comprehensive understanding.

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Study 1

Title: Empathy in the Workplace: Disentangling Affective from Cognitive Empathy

Short title: Affective and Cognitive Empathy

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Abstract

Empathy plays a crucial role in the workplace, associated with positive outcomes, including helping behavior and task performance. While most studies have treated empathy as a unidimensional and trait-like characteristic, empathy is best understood as a two-dimensional construct, encompassing stable and fluctuating aspects. Considering this conceptualization, our research explores the relationship between the two components – affective and cognitive empathy – with well-being and prosocial behavior, both at the trait and state levels. We hypothesized that affective empathy is positively associated with fatigue, whereas cognitive empathy is positively related to provided support. Furthermore, we predicted that these relationships would be especially pronounced on days when employees witness conflicts in the workplace. Our results, drawn from two diary studies (*N*s = 119 and 179), indicated that affective empathy was related to fatigue, and cognitive empathy was related to provided support on the trait level, supporting our hypotheses. However, the distinctions between the two empathy dimensions were less prominent at the state level, and these effects did not depend on observed conflicts. These findings suggest that affective and cognitive empathy have differential effects, emphasizing the need for balanced and beneficial utilization of empathy in both theoretical development and practical workplace contexts.

Keywords: affective empathy, cognitive empathy, trait and state empathy, social support, well-being, fatigue, conflicts.

Empathy in the Workplace: Disentangling Affective from Cognitive Empathy

Empathy is a concept that garners widespread interest, evident among both lay people's doubled Google searches over the last decade (Google Trends, 2022), and among scholars across various disciplines, with more than 370'000 entries in Google Scholar in the last five years. In the field of work psychology, this interest is particularly pronounced due to empathy's association with important work outcomes such as performance (Aw et al., 2020) and helping behavior (Batson et al., 2007). Despite this attention, research on empathy often lacks accuracy in its conceptualization and operationalization (Clark et al., 2019). Contemporary perspectives regard empathy as a concept with two components, namely affective empathy, which is experiencing an affective state congruent to others' affective state, and cognitive empathy, which is understanding the other's affective state (e.g., Brazil et al., 2023; Clark et al., 2019). Of importance, while most research in work psychology has largely overlooked the multidimensionality nature of empathy, the few studies that made a distinction revealed differential effects for affective and cognitive empathy (e.g., Brazil et al., 2023; Urbonaviciute & Hepper, 2020).

Furthermore, while empathy can yield positive outcomes, such as fostering altruism (Batson et al., 1988), it may also include downsides that have yet to receive comprehensive exploration. The plausibility of these downsides is underscored by empathy's inherent high sensitivity to the emotional states of others (Burch et al., 2016). As we delve into below, affective and cognitive empathy may assume different roles in this context. Affective empathy, characterized by feeling the same emotion as the other, may result in exhaustion if individuals around us experience negative emotions. Conversely, cognitive empathy, rooted in the understanding of these emotional states, might act as a buffer against being overwhelmed by the negative emotions of others. Further research is warranted to unravel the difference of affective

and cognitive empathy with common work events eliciting emotional responses in others, such as observing a conflict between colleagues and the resulting emotional outcomes. In the present study, we thus extend our investigation beyond the benefits and downsides of affective and cognitive empathy in the workplace. Additionally, we examine how the two components of empathy relate to observing conflicts, which may either have a detrimental impact on well-being by depleting resources or exert a positive influence in providing support to others.

The present research offers four contributions to the existing literature. Firstly, it delves into the distinct effects of affective and cognitive empathy on employee behaviors and well-being, a distinction frequently overlooked in many studies (e.g., Burch et al., 2016; Decety & Cowell, 2014). Often, studies have mistakenly inferred conclusions about empathy from related concepts such as sympathy (Schroeder et al., 2015), emotional contagion (e.g., Batson et al., 2007), or perspective-taking (Longmire & Harrison, 2018). However, existing evidence from the limited studies that have made this distinction suggests that affective and cognitive empathy yield different effects. For instance, while cognitive empathy has been associated with prosocial behavior, affective empathy has not (Brazil et al., 2023). In contrast, while affective empathy has been linked to distress, cognitive empathy has not (Powell, 2018). These mixed findings emphasize the distinct roles played by the two components of empathy, thereby prompting a reevaluation of the common practice in work psychology to consider empathy as a unidimensional concept. Consequently, the present study helps tackling the issue of differential effects by explicitly discriminating between affective and cognitive empathy, a distinction that is critical to achieve a more precise conceptualization of empathy.

Secondly, this study not only expands our understanding of empathy but also makes a significant contribution by diversifying empathy's outcomes investigated. Most existing research

in the work context has focused on positive behavioral outcomes, such as enhanced task performance (Ployhart & Hakel, 1998) and increased helping behaviors (Batson et al., 2007), as well as its associations with personality (Brazil et al., 2023). In contrast, our study takes a comprehensive approach, exploring the effect of empathy on both behavior and well-being in the workplace. While empathy fosters prosocial behavior, empathy is also resource intensive, as highlighted in the work of Cameron et al. (2019), which implies its potential to exert a detrimental influence on well-being. Consequently, the present study not only investigates the positive impact of empathy through providing support but also delves into its potential negative impact on well-being.

Thirdly, we investigate the interplay between empathy and emotionally charged situations. Guided by the DIAMONDS model (Rauthmann et al., 2014) and the trait activation theory (TAT; Tett & Burnett, 2003), we postulate that empathy is more likely to be activated in empathy-relevant situations. These empathy-relevant situations involve the observable emotional states of others, such as relationship conflicts among coworkers. We therefore seek to unravel how affective and cognitive empathy shapes one's behavioral reaction (i.e., providing support) and well-being (i.e., fatigue), especially when observing an emotionally laden event such as a conflict at work.

Finally, this study responds to a recent call in the organizational psychology field to investigate empathy on both the trait and the state level (Clark et al., 2019), by further delving into the nuances of empathy-related situations. The TAT (Tett & Burnett, 2003) and DIAMONDS model (Rauthmann et al., 2014) inform our understanding of why empathy may fluctuate depending on empathy-relevant contexts. Traditionally, research predominantly examined empathy as a stable, trait-like characteristic, with numerous studies adopting this perspective (e.g., Andreychik & Lewis, 2017; Koopman et al., 2021). Nevertheless, evidence suggests that empathy

may vary daily and exhibit within-person variations over short timeframes (e.g., Nezlek et al., 2001; Toomey & Rudolph, 2018). Therefore, this study adopts a dual approach, examining both dispositional, stable (i.e., trait) and situational, fluctuating (i.e., state) aspects of empathy. We aim to explore whether the proposed associations of empathy with well-being and support provision exist both for stable interindividual differences in trait empathy (and short-term fluctuations in state empathy. While we do not expect differential effects for trait and state empathy, testing the effects on both levels is critical and can inform theory as the relationship between two constructs at state (within-person) level may differ from the relationship between the analogous constructs at the trait (between-person) level in size or sign (e.g., Dalal et al., 2014; Hamaker, 2012).

Theoretical Framework and Hypotheses Development

In the realm of empathy research, a predominant focus has been on viewing empathy as a stable trait, akin to a personality characteristic. This perspective, reflected in studies (e.g., Koopman et al., 2021; Longmire & Harrison, 2018), has uncovered valuable insights into interindividual differences in empathy and their association with prosocial behaviors. However, this line of inquiry has largely overlooked empathy's variability within individuals. Diary-based research, as highlighted by Nezlek et al. (2001), has revealed significant daily fluctuations in empathy, emphasizing its dynamic nature and the varying degrees of empathy experienced in different circumstances. Empirical evidence has demonstrated that empathy can exhibit within-person variations not only over several days (Nezlek et al., 2001) but also within the same day (Nezlek et al., 2007; Toomey & Rudolph, 2018). This body of research underscores empathy's dynamic character, suggesting that it functions as a state responsive to situational cues. Experimental and neuroscience studies have pointed to the role of situational factors in activating

state empathy, such as exposure to others' affective states (Jackson et al., 2005; Rameson et al., 2012).

Responding to this evolving understanding, scholars have emphasized the need for research encompassing both trait and state empathy (e.g., Clark et al., 2019). While previous research has mainly focused on the antecedents of state empathy, such as the exposure to others' affective states and pain (Jackson et al., 2005), direct interactions with others (Nezlek et al., 2007; Westman et al., 2013), perspective taking (Batson et al., 2002), and one's own affective experience (Nezlek et al., 2001), studies examining its outcomes are notably lacking. Furthermore, research on state empathy has often failed to distinguish between its affective and cognitive components (for an exception, see Powell & Roberts, 2017). Our study aims to address this gap by testing hypotheses concerning both trait and state empathy. However, we do not make differential assumptions for trait and state empathy and instead propose the same hypotheses for both.

As we explore empathy as both a trait and state, it is crucial to recognize its two key components: affective empathy, which is experiencing an affective state congruent to others' affective state, and cognitive empathy, which is understanding the other's affective state (Clark et al., 2019). To illustrate these facets abstractly, one may laugh and feel the joy of a baby laughing without understanding why (affective empathy). Conversely, one might imagine understanding the emotions of a stranger crying at a funeral without personally feeling their sadness (cognitive empathy). Despite their interchangeability in the literature, it is noteworthy that the two facets exhibit only a moderate relationship with each other (r = .31) (Reniers et al., 2011) and involve distinct cognitive processes. Specifically, affective empathy is considered to be automatically elicited (Cuff et al., 2016), whereas cognitive empathy relies on controlled processes (Heyes, 2018). In light of these distinctions, we argue that differentiating between these two facets is

crucial and that positive outcomes, such as providing social support, are mainly driven by cognitive empathy, while negative outcomes, such as impaired well-being, are mainly driven by affective empathy.

Empathy and Social Support

The Empathy-Altruism hypothesis (Batson et al., 1981) posits that experiencing empathy leads to altruistic behavior and support for others. This hypothesis is supported by research indicating that conditions eliciting high empathic responses to individuals in distress result in helping, even when helping is not easy to do (Fultz et al., 1986). Conversely, conditions evoking low empathic responses lead to helping only when it is difficult to escape, aligning with the hypothesis that empathic emotions drive altruistic motivation and behavior to alleviate another's distress. In line with this, social support is often defined to encompass empathy (e.g., “emotional social support includes talking, listening, and expressing concern or empathy for a distressed individual.”; Zellars & Perrewé, 2001, p. 459). Previous studies further reinforce this connection by demonstrating that empathy is positively linked with provided social support (e.g., Brazil et al., 2023; Hafenbrack et al., 2020; Longmire & Harrison, 2018; Scott et al., 2010).

However, while previous research mainly treated empathy as a unidimensional construct (for an exception, see Brazil et al., 2023), we suggest that cognitive and affective empathy, despite potentially differing in their impact, both positively influence support behavior. Cognitive empathy, which helps to understand other persons' emotions, may encourage more supportive behavior by enhancing confidence in effectively addressing others' emotional needs (Cameron et al., 2019; Schroeder et al., 2015). On the other hand, affective empathy involves a deep emotional understanding that, while it strongly motivates helping behaviors, may sometimes lead to emotional overload, potentially complicating the support process. Nevertheless, neuroscience has

shown that affective empathy not only involves mirroring the pain of others but also fosters feelings of concern and a strong motivation to help (de Vignemont & Singer, 2006). Therefore, despite these differences, we hypothesize that both cognitive and affective empathy are positively associated with social support:

Hypothesis 1: (a) Cognitive and (b) affective empathy are positively related to given social support.

Empathy and Fatigue

While empathy can yield positive effects on interpersonal behavior, it is not without its associated costs. Individuals are keenly aware of these costs, often perceiving empathy as psychologically taxing and subsequently attempting to circumvent it to protect their well-being (Cameron et al., 2019). As highlighted by Hoffman (1981a, p. 133), "empathy […] has the property of transforming another person's misfortune into one's own feeling of distress''. Notably, the act of observing another individual's pain and experiencing one's own pain activates the same neuronal areas (Preston & de Waal, 2002), underscoring the potentially detrimental aspects of empathy. Moreover, the process of regulating negative emotions depletes our limited psychological resources pool (e.g., Muraven & Baumeister, 2000), ultimately contributing to emotional exhaustion (Grandey, 2003). Correspondingly, empathic concern was found to drain psychological resources, leaving employees emotionally exhausted (Lin et al., 2022).

We posit that the two types of empathy may exhibit differential associations with fatigue. Affective empathy, involving the absorption of others' negative emotions, might lead to feelings of being overwhelmed, consequently depleting one's psychological resources for emotional regulation. Lewis (2010) introduces the concept of "empathic overarousal", suggesting that bystanders may redirect their attention to their own distress, or engage in cognitive strategies to

disengage from distressing images of the victim, highlighting a potential mechanism through which affective empathy could contribute to heightened personal distress and, subsequently, impaired well-being. In contrast, cognitive empathy could enable individuals to comprehend the emotions of the other person without necessarily sharing those emotions. Supporting this notion, previous research has revealed that feeling the emotions of others (affective empathy) is related to personal distress, whereas focusing on the understanding of emotional reactions (cognitive empathy) is linked to reduced personal distress (Decety & Cowell, 2014). Therefore, based on our theoretical reasoning and empirical evidence, we postulate the following hypothesis:

Hypothesis 2: (a) Cognitive empathy is negatively related to fatigue and (b) affective empathy is positively related to fatigue.

Empathy and Observed Conflicts

Our previous focus has centered on understanding the impact of empathy on behavior and well-being regardless of the context. However, by incorporating insights from the DIAMONDS model (Rauthmann et al., 2014) and aligning with the principles of the Trait Activation Theory (Tett & Burnett, 2003) – both highlighting the interplay between individual characteristics and situational cues – our study delves into the dynamics of how empathy responds to contextual factors, particularly in scenarios highly relevant to empathy, such as workplace conflicts. Serving as a conceptual guide, the DIAMONDS model illustrates how individuals process objective situations concurrently with various person aspects, ultimately giving rise to unique psychological situations. Building upon this conceptual foundation, our study extends the understanding of how empathy reacts to contextual factors. According to the DIAMONDS model, objective situations such as conflicts among coworkers are linked with psychological situations, and how they are understood and interpreted depend on individual facets such as affective or cognitive empathy.

This interpretation, in a cascading effect, shapes subsequent behavior, leading to outcomes such as the provision of social support or fatigue. Affective empathy, for instance, may influence individuals to perceive conflicts through the DIAMONDS model's facet of Negativity lens, anticipating negative emotions. This aligns with affective empathy's aspect of emotional absorption, illustrating how individuals empathetically respond to emotionally charged conflicts, resulting in fatigue. Conversely, cognitive empathy may be linked to the Sociality facet, potentially leading to the provision of support after observing conflicts. Here, the DIAMONDS model's facet of Adversity becomes pertinent, framing observed conflicts as situations containing problems, conflicts, or criticism. A nuanced exploration of empathy within specific situational contexts, guided by the DIAMONDS model, enhances our understanding of how individual characteristics and contextual factors intertwine, shaping empathetic responses and consequential behaviors.

Shifting our focus from the DIAMONDS model, we turn to the Trait Activation Theory (Tett & Burnett, 2003), which further underscores the influence of contextual factors on the activation and expression of specific personal traits. In line with this theory, we posit that empathy is likely responsive to contextual factors or empathy-relevant situations, especially those involving the observation of relationship conflicts at work. Glomb (2002) showed that over half of unpleasant workplace interactions have witnesses, increasing the likelihood of observing a conflict at work. It is plausible that witnessing a conflict triggers empathy in the observer, given the display of negative emotions by the conflict's participants, aligning with the premises of Trait Activation Theory. Notably, empathy is characterized by heightened arousal in social situations and increased vigilance to others' reactions (Nezlek et al., 2001). Consequently, individuals with strong empathic tendencies tend to perceive conflicts more readily (LeBlanc et al., 2012) and are more adept at detecting minor quarrels (Van Lissa et al., 2017).

Our focus on relationship conflicts is grounded in the notion that they tend to have a more severe impact than other types of conflicts such as task conflicts and are most likely to result in observable emotional outcomes (Meier et al., 2013). Relationship conflicts are more personal and are associated with more intense reactions and well-being consequences (De Dreu et al., 2004). Observing a relationship conflict among colleagues often leads to the experience of negative emotions (e.g., Honeycutt et al., 2014; Matthews et al., 2017). Regulating these emotions can deplete one's psychological resources (Tice et al., 2001), resulting in fatigue. Simultaneously, observing conflicts may also lead to providing support to the individuals involved in the conflict to reassure and comfort them.

Building upon on our previous rationale, the act of observing relationship conflicts in conjunction with affective empathy is expected to result in heightened fatigue and reduced support provision. Contrastingly, cognitive empathy, which involves cognitive reframing and emotional distancing from others' negative emotions (Decety & Cowell, 2014), is likely to mitigate the negative impact of observing conflicts. Consequently, cognitive empathy is expected to lead to lower fatigue and increased provision of social support in the context of observed conflicts. In line with this reasoning, we postulate the following hypotheses:

> *Hypothesis 3: (a) Observing relationship conflicts is positively related to given social support. (b) This effect is moderated by cognitive empathy; it is stronger among individuals with high (compared to low) cognitive empathy. Moreover, (c) this effect is moderated by affective empathy; it is weaker among individuals with high (compared to low) affective empathy.*

Hypothesis 4: (a) Observing relationship conflicts is positively related to fatigue. (b) This effect is moderated by cognitive empathy; it is weaker among individuals with high (compared to low) cognitive empathy. Moreover (c), this effect is moderated by affective empathy; it is stronger among individuals with high (compared to low) affective empathy.

The Present Study

The aim of the present study is to address the call within the scientific literature (e.g., Aw et al., 2020; Clark et al., 2019) to comprehensively explore empathy in its multidimensionality on the trait and state level. Affective empathy's potential to lead to heightened sensitivity to the negative emotions of others, potentially resulting in emotional overwhelm, contrasts with cognitive empathy's capacity to provide emotional distance to these negative emotions, optimizing positive behavioral reactions and safeguarding well-being. Given these divergent effects, our objective is to examine the differential outcomes of affective and cognitive empathy, particularly in the context of observing workplace relationship conflicts. To achieve this, we present the results of two daily diary studies. Study 1 focused on trait empathy, while Study 2 delved into both trait and state empathy.

Transparency and Openness

Data and code for both studies are available on the Open Science Framework (OSF; *https://osf.io/2tb6h/)*.

Study 1

Method

Participants and Procedure

One hundred and eighty-two Swiss employees working at least 60 percent of full-time employment (equivalent to a minimum 25h/week) were invited to participate in a diary study about organizational well-being and were recruited with the help of Master's students. Participants were first sent a link by email to fill in a baseline questionnaire. At the beginning of the following week, they began completing daily surveys for two weeks (weekends excluded, thus 10 days). Each day, participants filled in the survey before leaving work (response window of four hours). As compensation, at the end of the study, participants received individual feedback about their work situation and well-being and took part in the draw of gift cards.

Of the initial sample of 182 participants, 37 persons did not fill in the baseline survey. Additional 26 participants were excluded from the analyses due to providing insufficient data (i.e., completing less than four daily surveys), resulting in a final sample of 119 participants who filled in 926 daily surveys.

The final sample consisted of a majority of women (60%), working on average 40.94 hours per week (SD = 8.91), aged from 19 to 61 years old (M = 34.97, SD = 12.38), and mean tenure in their ongoing job of 6.01 years (SD = 7.68). Moreover, 9 percent had completed nine years or less of schooling (i.e., elementary and middle school), 25 percent had completed 12 years of education, 34 percent had a Bachelor's degree, 25 percent had a Master's degree, and 7 percent had a doctorate. Thirty-seven percent of participants had a supervisor status.

Measures

All items were presented in French. The original English measures were translated and back-translated by a native English speaker (Brislin, 1970).

Trait Empathy. Affective and cognitive trait empathy were assessed in the baseline survey using the QCAE – Questionnaire of Cognitive and Affective Empathy (Reniers et al., 2011).

Response format ranged from *completely disagree* (1) to *completely agree* (5). Affective empathy consisted of 12 items; an example is: ‘’I am inclined to get nervous when others around me seem to be nervous.’’ Cognitive empathy consisted of 19 items; an example is: ‘’I can tell if someone is masking their true emotion.’’

Observed Relationship Conflicts. At the end of the workday, observed relationship conflicts at work were assessed with three items from Jehn (1995) that we adapted to the observer's perspective. Response format ranged from *not at all* (1) to *extremely* (5). An example is: ‘’Today, how much did you observe tensions between people at work?’’

Given Social Support. At the end of the workday, given social support was assessed with four items from Deeter-Schmelz and Ramsey (1997) that we adapted to the protagonist's perspective. Response format ranged from not at all (1) to extremely (5). An example is: ‘’Today, how much did you show concern towards people at work's problems?’’

Fatigue. At the end of the workday, fatigue was assessed with three items from Ciarocco et al.'s scale (2007). Response format ranged from *not at all* (1) to *extremely* (5). An example is: “I feel mentally exhausted.’’

Results and Discussion

Means, standard deviations, intraclass coefficients, and zero-order correlations for the main variables are shown in Table 1. Given that we had nested data (multiple measures per employee), we conducted multilevel random coefficient modeling using the R package lme4 (Bates et al., 2014). The Level 1 variable (observed conflict) was group mean-centered, whereas the Level 2 variables (affective and cognitive empathy) were grand mean-centered. Table 2 presents the results from the multilevel analyses.

Results indicate partial support for Hypotheses 1 and 2. Consistent with Hypothesis 1a and diverging from Hypothesis 1b, only trait cognitive empathy ($B = 0.62$, $p = .003$) but not affective empathy ($B = 0.12$, $p = .454$) was positively related to given social support. In the case of hypothesis 2, only trait affective empathy was related to fatigue ($B = 0.56$, $p < .001$) supporting Hypothesis 2b. However, diverging from Hypothesis 2a, cognitive empathy was unrelated to fatigue ($B = 0.05$, $p = .804$).

Regarding hypotheses 3 and 4, observed conflicts were positively related to fatigue ($B = 0.13$, $p = .005$), supporting Hypothesis 4a; however, in contrast to Hypothesis 3a, it was unrelated to given social support ($B = 0.09$, $p = .198$). Furthermore, neither trait affective nor trait cognitive empathy did moderate the effect of observed conflicts on given social support and fatigue; thus, leading to the rejection of Hypotheses 3b, 3c, 4b, and 4c.

In sum, these results offer some first evidence for differential effects of affective and cognitive empathy on behaviors and well-being. Whereas trait cognitive empathy seems to have beneficial effects, trait affective empathy rather reflects a vulnerability factor for employees.

Study 2

Study 2 was conducted to replicate and extend Study 1. By examining both trait and state empathy, we offer a more fine-grained understanding of the role of affective and cognitive empathy.

Method

Participants and Procedure

The data collection procedure was the same as in Study 1. Among the 244 participants recruited, 192 answered the baseline survey. Thirteen persons completed less than four daily

surveys and hence were excluded from the analyses resulting in a total sample of 179 participants who filled in 1,330 daily surveys.

In the final sample, 90 participants were women, 88 were men and one person did not want to answer, age ranged from 19 to 64 years (M = 33.72, SD = 12.28), mean tenure in the current job was of 5.91 years (SD = 7.86) and on average, participants worked 40.11 hours per week (SD = 8.86). With respect to educational degree, 42 percent had a high school diploma or below, 30 percent had a bachelor's degree, 25 percent has a master's degree and 2 percent had a PhD. Thirty percent had a supervisor status.

Measures

Trait Empathy. As in study 1, affective and cognitive trait empathy were assessed with the scale from Reniers et al. (2011) in the baseline survey.

State Empathy. At the end of the workday, affective and cognitive state empathy was assessed using the Measure of State Empathy (Powell & Roberts, 2017). Affective empathy consisted of three items and response format ranged from *not at all* (1) to *completely* (7). An example is: ''Today, the feelings of others were transferred to me.'' Cognitive empathy consisted of three items and response format ranged from *not at all* (1) to *completely* (7). An example is: ''Today, I understood how individuals I was interacting with were feeling.''

Observed Relationship Conflicts. As in study 1, observed relationship conflicts were assessed with the scale from Jehn (1995) at the end of the workday.

Given Social Support. As in study 1, given social support was assessed with the scale Deeter-Schmelz and Ramsey (1997) at the end of the workday.

Emotional Fatigue. At the end of the workday, emotional fatigue was assessed with the three items from Frone and Tidwell (2015). Response format ranged from *not at all* (1) to

extremely (5). An example is: ‘’To which extent do you agree, at the current moment: I feel emotionally exhausted.’’

Results and Discussion

Means, standard deviations, intraclass coefficients, and zero-order correlations for the main variables are shown in Table 3. Intraclass coefficients indicate that there is a variance between and within individuals for empathy (ICC for affective empathy = .489; for cognitive empathy = .476), showing that affective and cognitive empathy fluctuates considerably across days. Findings concerning trait empathy obtained in in Study 1 were replicated with trait cognitive empathy positively correlated to given social support and trait affective empathy positively related to fatigue. State empathy showed more nuanced effects.

Table 4 presents the results from the multilevel analyses. Regarding trait empathy, consistent with Hypothesis 1a and divergent from Hypothesis 1b, only trait cognitive empathy (B = 0.64, p < .001), but not affective empathy (B = 0.01, p = .897) was positively associated with given social support. In the case of Hypothesis 2, only trait affective empathy was positively associated with fatigue (B = 0.66, p < .001), supporting Hypothesis 2b. In contrast to Study 1, where cognitive empathy was unrelated to fatigue, Study 2 showed a trend toward our expectations, despite still diverging from Hypothesis 2a (B = -0.31, p = .076). Regarding hypotheses 3 and 4, observed conflicts were positively related to fatigue (B = 0.10, p = .029), supporting Hypothesis 4a; however, in contrast to Hypothesis 3a, they were unrelated to given social support (B = 0.04, p = .342). Furthermore, as in study 1, neither trait affective nor trait cognitive empathy did moderate the effect of observed conflicts on given social support and fatigue; thus, leading to the rejection of Hypotheses 3b, 3c, 4b, and 4c.

Regarding state empathy, consistent with Hypothesis 1a and 1b, both state cognitive empathy (B = 0.13, p < .001) and state affective empathy (B = 0.18, p < .001) were positively associated with given social support. In the case of Hypothesis 2, only state cognitive empathy was negatively associated with fatigue (B = -0.14 p < .001), supporting Hypothesis 2a. However, diverging from Hypothesis 2b, state affective empathy was unrelated to fatigue (B = 0.03, p = .291). As on the trait level, neither state affective nor state cognitive empathy did moderate the effect of observed conflicts on given social support and fatigue; thus, leading to the rejection of Hypotheses 3b, 3c, 4b, and 4c.

The results replicated our findings of study 1, highlighting the different roles of affective and cognitive empathy with fatigue and providing support. Of interest, the analysis on state empathy bespeaks a lesser difference between affective and cognitive empathy. Both are associated with given social support, which underlines the positive impact of both components of state empathy.

General Discussion

This paper investigated the effects of affective and cognitive empathy on given social support and the experience of fatigue at work within the context of observing relationship conflicts in two daily diary studies. Our findings reveal that trait affective empathy is positively associated with fatigue, whereas trait cognitive empathy is positively associated with providing social support. Interestingly, contrary to our assumptions, the effects of empathy were not intensified in an emotionally laden situation, such as observing conflicts among others. The findings from our first study thus suggest that trait affective empathy may primarily play a more negative and emotionally driven role, while trait cognitive empathy may have a more positive and behavioral impact. Addressing the call of scholars (Clark et al., 2019) to explore state empathy, our second

study highlights relatively weaker distinctions between affective and cognitive empathy on the state level when compared to the trait level. Notably, in contrast to trait empathy, state empathy appears to have predominantly positive effects. Both affective and cognitive state empathy were positively associated with provided social support, and cognitive state empathy was negatively associated with fatigue. This may suggest that state empathy not only positively contributes to positive behaviors but, in the case of cognitive empathy, may also potentially play a role in promoting to enhanced well-being.

Our study aligns with a limited body of research emphasizing the crucial distinction between affective and cognitive empathy, shedding light on its significance, often overlooked in prior studies (e.g., Burch et al., 2016; Decety & Cowell, 2014). This relevance is affirmed by our replication and support of previous findings (e.g. Brazil et al, 2023; Petrocchi et al., 2021; Powell, 2018) demonstrating that cognitive empathy is positively related to social support provision, while affective empathy correlates with fatigue. Specifically, cognitive empathy seems to enhance the understanding of others' emotional states, thereby fostering greater social support. This is consistent with a cross-sectional study among adolescents that found a stronger relationship between cognitive empathy and prosocial behavior than affective empathy (Brazil et al., 2023). Conversely, high levels of affective empathy may overwhelm individuals with their own emotions, limiting their ability to support others. Supporting this, research has shown that while cognitive empathy is associated with reduced distress, affective empathy correlates with increased distress, reinforcing the notion that empathically experiencing others' negative emotions can diminish psychological well-being (Powell, 2018). These results contribute to the ongoing discourse on the distinct roles these empathy components play at work.

Furthermore, our findings not only expand upon the discussion initiated by Clark et al. (2019) regarding the examination of empathy at both trait and state levels but also enhance our comprehension of how empathy-related situations shape employee behavior and well-being. By integrating the DIAMONDS model (Rauthmann et al., 2014) and Trait Activation Theory (Tett & Burnett, 2003), we offer an approach to understanding the fluctuation of empathy in response to contextually relevant situations. Indeed, empirical evidence has supported the variability of empathy in reaction to specific situational triggers (Jackson et al., 2005; Rameson et al., 2012). Our research contributes to this advancing field by delving deeper into the impact of diverse empathy-related situations on employee behavior and well-being. Additionally, our study underscores the importance of examining both stable and situational aspects of empathy by assessing it at both trait and state levels. Through demonstrating the variability of empathy across different days and individuals, we further explored the concept of state empathy. Importantly, our study highlights the predominantly positive effects of state empathy on employee well-being and prosocial behavior.

Expanding the scope of our examination beyond the effects of empathy, our study resonates with emerging research focusing on the impact on workplace bystanders witnessing conflicts or mistreatment, aligning with vicarious mistreatment literature (Dhanani & LaPalme, 2019). Bystanders of conflicts undergo stress responses, manifesting as psychological and physiological strains (Sonnentag & Frese, 2003). In line with this research, observing conflict was related to fatigue in both studies. Bystander intervention research also underscores the role of the social environment (e.g., presence of others) on the likelihood of taking action (Darley & Latané, 1968), such as providing social support. Bystander intervention research emphasizes the role of the social environment, influencing actions such as providing social support, as highlighted by the empathy-

altruism hypothesis (Batson et al., 1981), as it explores the egoistic or altruistic motivations underlying the desire to assist someone in need. This underscores that the significance lies more in the type of empathy and the resources needed for emotional regulation, rather than the motivation or social evaluation (Fultz et al., 1986), aligning with the concept that bystanders seek cues from their social environment for intervention (Mayer et al., 2013).

Recognizing the impact of power differences and individual relationships provides a more nuanced perspective on the role of empathy in bystander responses to workplace conflicts. Power dynamics, as evidenced by Hershcovis et al. (2017), play a crucial role in shaping how individuals respond to interpersonal stressors, with those in positions of power more inclined to intervene in instances of incivility. Furthermore, the propensity to empathize with others, influenced by multiple factors and referred to as the empathy bias (Bloom, 2017), is notably contingent on the nature of the relationship. Individuals often exhibit greater empathy and a heightened inclination to provide support to members of their own group (e.g. Klimecki, 2019; de Waal & Preston, 2017). However, in our research, we did not consider the specific individuals involved in conflicts or broader contextual factors like power or relationship dynamics. Nevertheless, these aspects may have played a significant role in shaping the affective and cognitive empathy experienced by our participants, subsequently influencing their well-being and behavioral responses, potentially explaining null-findings for observed conflict and interaction effects. Nevertheless, despite these null findings, the importance of considering the broader context and social environment should be reinforced when addressing workplace bystanders witnessing conflicts.

Theoretical and Practical Implications

The present findings offer practical and theoretical implications. From a practical standpoint, the results provide insights for occupational health professionals. Firstly, the

experience of affective empathy in the workplace is related to fatigue, emphasizing the importance of finding ways to mitigate its negative consequences. A promising approach is to enhance positive emotions. Research has shown that positive affect can effectively help individuals cope with the emotional exhaustion that often accompanies empathetic experiences (Lin et al., 2022). One avenue to foster positive emotions is through mindfulness techniques. Engaging in present-focused attention while providing support to others has been demonstrated to predict positive emotions and simultaneously prevent negative emotions (Cameron & Fredrickson, 2015).

Secondly, cognitive empathy is associated with an increased inclination to provide support while preserving well-being. This insight highlights a promising area for interventions aimed at enhancing cognitive empathy. Practitioners can consider strategies such as encouraging perspective-taking and helping individuals put themselves in the shoes of others. For instance, an effective intervention involves training team members to share personal information, actively listen, and discuss differences and similarities in perspectives, as demonstrated by Jungert et al. (2018). These efforts have the potential to promote cognitive empathy, leading to more constructive behavioral responses. It is, however, crucial to design these interventions thoughtfully, ensuring a specific emphasis on enhancing cognitive empathy to harness the benefits of perspective-taking while minimizing potential adverse effects of affective empathy.

From a theoretical standpoint, the implications of our empathy study contribute to a nuanced understanding of empathy in organizational contexts. Firstly, our findings underscore the importance of differentiating between affective and cognitive empathy in measurement tools, given their distinct impacts on employee behavior and well-being. This distinction is crucial for researchers and practitioners aiming to accurately capture the multifaceted nature of empathy, guiding interventions, and strategies tailored to specific empathic components. Moreover, our

study prompts further exploration into the realm of state empathy, advocating for a comprehensive investigation into both affective and cognitive empathy in varying situational contexts. Traditional research often focused on trait empathy as a stable characteristic, but our study emphasizes the relevance of examining empathy's fluctuating aspects, shedding light on how daily variations in empathy is linked to employee well-being and prosocial behavior.

Overall, our theoretical contributions extend beyond the conventional understanding of empathy, paving the way for more refined conceptualizations and measurement approaches in organizational psychology.

Limitations and Future Research

The current study should be understood in light of its limitations. Firstly, we focused only on affective and cognitive empathy but did not consider behavioral empathy, which encompasses the outward expression of affective and cognitive empathy (Clark et al., 2019). We omitted behavioral empathy for two reasons. Firstly, the use of self-report measures in our research posed a challenge, as behavioral empathy is typically assessed with methodologies like behavioral mirroring (Chartrand & Larkin, 2013) and empathic communication (Kerig & Baucom, 2004), making it more suited for studies with other-report (Clark et al., 2019). Secondly, given our focus on social support, the primary emphasis of our study, we prioritized investigating the concept of support provision as a specific behavioral consequence of affective and cognitive empathy rather than delving into the broader domain of behavioral empathy. In future research, it may be valuable to measure behavioral empathy to provide a more comprehensive understanding of empathy, its mechanisms, and its outcomes within workplace contexts.

Secondly, the modest sample size may limit statistical power, particularly for detecting interaction effects. Despite having a relatively large number of participants (compared to other

diary studies; Gabriel et al., 2019), Mathieu et al.'s (2012) simulation study suggests that a higher number of daily measures per participant is needed for adequate statistical power in detecting cross-level interaction effects. As such, our null findings for the moderator effects may be a consequence of insufficient statistical power. Additionally, our reliance on self-report measures, especially in assessing state empathy, introduces potential methodological concerns. The unexpectedly high correlation between state affective and cognitive empathy warrants further investigation into the distinctiveness and reliability of these measures.

Finally, while the use of a daily diary study approach helped us to capture the employees' experiences at work as it is lived (Bolger et al., 2003), including its fluctuations from day to day and with little retrospective bias, the way we measured the observation of conflicts has also some limitations. Given that we did not measure specific conflict episodes, information is missing about duration of the conflict. It is plausible that conflict episodes extend beyond a single day and continued throughout the study period. Our study design does not allow for the examination of the development of conflicts over time. Future studies may, therefore, employ a different design, repeatedly asking about specific conflict episodes and examining how the trajectory is associated with empathy and its impact on the provision of support.

Conclusion

In a world where 90% of people experience an average of at least four emotions daily (Wilhelm et al., 2004), the significance of empathy, characterized by the capacity to both share and understand the emotional states of others, is underscored. Its importance within the realm of social interactions, particularly in the workplace where interpersonal relationships are capital for organizational effectiveness, cannot be overstated. Building upon earlier studies that have raised pertinent concerns in the conceptualization of empathy (e.g., Coll et al., 2017), this research

extends beyond theoretical discussions to provide empirical evidence of the differential effects of affective and cognitive empathy, with one being related to increased fatigue while the latter is related to greater provision of social support. These findings emphasize the need for a nuanced approach to the study of empathy, dispelling the notion of empathy as a single, unidimensional construct.

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Table 1

Means, Standard Deviations, ICC, and Correlations of the Measures (Study 1)

Variables	*M*	*SD-W*	*SD-B*	*ICC*	1	2	3	4	5
Level 1									
1. Observed conflicts	1.34	0.54	0.43	.37	(.85)	.04*	.16*	-	-
2. Given social support	3.09	0.76	0.77	.50	.01	(.88)	-.04	-	-
3. Fatigue	1.91	0.52	0.73	.65	.37*	.01	(.68)	-	-
Level 2									
4. Cognitive empathy	3.67	-	0.36	-	.14	.28*	.08	(.80)	-
5. Affective empathy	3.32	-	0.44	-	.06	.12	.34*	.19*	(.79)

Note. *SD-W* = standard deviation within-person, *SD-B* = standard deviations between-person. *SD* and *ICC* are based on variance estimates of unconditional (null) models. Correlations above the diagonal reflect the within-person associations of the constructs. Correlations below the diagonal reflect the between-person associations of the aggregated measures. Numbers in the diagonal reflect the Cronbach's Alpha. For Level 1 variables, Cronbach's Alpha was calculated with the R shiny web applications: *https:// psychmethods.shinyapps.io/WithinPersonResearch,* developed by Yang et al. (2022).

N: Level 1 = 926; Level 2 = 119.

* $p < .05$. Two-tailed tests

Table 2

Unstandardized Coefficient Estimates for the Multilevel Analysis of Affective Empathy, Cognitive Empathy, and Observed Conflicts on Given Social Support and Fatigue (Study 1)

	Given Social Support		Fatigue	
	B	*T*	*B*	*T*
Intercept	3.08*	42.60	1.95*	29.83
Level 1				
Observed Conflicts	0.09	1.31	0.13*	2.95
Level 2				
Affective Empathy	0.12	0.75	0.56*	3.77
Cognitive Empathy	0.62*	3.05	0.05	0.25
Observed Conflicts x Affective Empathy	0.01	0.07	0.11	1.03
Observed Conflicts x Cognitive Empathy	0.09	0.57	0.01	0.07

Note. *$p < .05$

Table 3

Means, Standard Deviations, ICC, and Correlations of the Measures (Study 2)

Variables	*M*	*SD-W*	*SD-B*	*ICC*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Level 1											
1. State Cognitive Empathy	4.89	0.75	0.72	.48	(.73)	.71*	-.02	.34*	-.14*	-	-
2. State Affective empathy	4.56	0.74	0.74	.49	.82*	(.65)	.05	.34*	-.06*	-	-
3. Observed conflicts	1.42	0.56	0.49	.44	.03	.06	(.89)	.05	.09*	-	-
4. Given social support	3.04	0.66	0.68	.51	.53*	.49*	.11	(.86)	-.06*	-	-
5. Emotional fatigue	2.15	0.61	0.87	.66	-.01	.06	.19*	-.05	(.74)	-	-
Level 2											
6. Trait Cognitive empathy	3.60	-	0.38	-	.41*	.34*	.08	.33*	-.08	(.82)	-
7. Trait Affective empathy	3.32	-	0.46	-	.12	.22*	.08	.06	.32*	.18*	(.78)

Note. *SD-W* = standard deviation within-person, *SD-B* = standard deviations between-person. *SD* and *ICC* are based on variance estimates of unconditional (null) models. Correlations above the diagonal reflect the within-person associations of the constructs. Correlations below the diagonal reflect the between-person associations of the aggregated measures. Numbers in the diagonal reflect the Cronbach's Alpha. For Level 1 variables, Cronbach's Alpha was calculated with the R shiny web applications: https:// psychmethods.shinyapps.io/WithinPersonResearch, developed by Yang et al. (2022).

N: Level 1 = 1330; Level 2 = 179.

** $p < .01$, * $p < .05$. Two-tailed tests

Table 4

Unstandardized Coefficient Estimates for the Multilevel Analysis of Trait and State Affective Empathy and Cognitive Empathy, and Observed Conflicts on Given Social Support and Fatigue (Study 2)

	Given Social Support		Fatigue	
	B	*T*	*B*	*T*
Intercept	3.01*	58.01	2.19*	34.13
Level 1				
Observed Conflicts	0.04	0.96	0.10*	2.22
State Affective Empathy	0.18*	5.00	0.03	1.06
State Cognitive Empathy	0.13*	3.85	-0.14*	-4.31
Observed Conflicts x State Affective Empathy	-0.04	-0.62	0.03	0.49
Observed Conflicts x State Cognitive Empathy	0.06	0.97	-0.01	-0.11
Level 2				
Trait Affective Empathy	0.01	0.13	0.66*	4.65
Trait Cognitive Empathy	0.64*	4.60	-0.31	-1.79
Observed Conflicts x Trait Affective Empathy	-0.10	-1.18	0.04	0.49
Observed Conflicts x Trait Cognitive Empathy	-0.19	-1.86	0.04	0.37

Note: *$p < .05$

Study 2

Title: **On the Verge: When the Observation of Prosocial Behaviors can Turn from Positive to Negative**

Short title: Observing Prosocial Behavior

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Abstract

This study investigates the underexplored effects of observing prosocial behaviors in the workplace on well-being and job satisfaction. While the positive impact of engaging in and receiving prosocial behaviors - actions intended to benefit others - is established, the perspective of observers has been quite overlooked. We explore how witnessing these behaviors influences employees and how they can shift from positive to negative depending on the social context, thus impacting employee well-being and job satisfaction. We therefore consider the roles of social connectedness and helping pressure as moderating factors. The findings, drawn for a two-week diary study (N = 153), indicate that observing prosocial behaviors is linked to increased positive affect and decreased negative affect, even when controlling for experienced prosocial behaviors, highlighting the positive impact of simply witnessing prosocial behaviors. However, observing prosocial behaviors did not significantly affect job satisfaction, nor were the effects moderated by social connectedness or helping pressure. This study enhances our understanding of the workplace by highlighting the importance of creating environments where prosocial behaviors are visible and acknowledged, thereby promoting better overall employee well-being.

Keywords: prosocial behavior, observation, well-being, job satisfaction, social dynamics, workplace culture.

On the Verge: When the Observation of Prosocial Behaviors can Turn from Positive to Negative

Social bonds are the foundation of human life and without prosocial behaviors, humans would not have thrived (Crocker et al., 2017). In the workplace, with more than 90% of employees having coworkers (Chiaburu & Harrison, 2008), cooperation and helping behaviors enabled the blossoming of organizations (Van Kleef & Lelieveld, 2022). Indeed, employees reported that they provide and receive prosocial behaviors, defined as "actions that promote or protect the welfare of individuals, groups, or organizations" (Brief & Motowildo, 1986, p. 5), daily (e.g., Glomb et al., 2011; Koopman et al., 2016). Research flourished on prosocial behaviors, both for those engaging in (e.g., Lanaj et al., 2016, Weinstein & Ryan, 2010) and those receiving it (e.g., Bolino et al., 2015). However, little attention has been given to the impact on those observing prosocial behavior at work. Some preliminary evidence suggests that employees who observe prosocial behavior also experience increased well-being (Chancellor et al., 2016). Thus, further research is essential to uncover the full spectrum of prosocial behavior's impact, particularly on those who observe it, while considering how social context may lead to differential effects.

By focusing on the observation of prosocial behavior in the workplace, this study aims to contribute to the existing knowledge by revealing both the positive and negative effects of such behaviors. The judgments people make about the prosocial actions they observe are influenced by the social context and can notably impact their well-being (Fiske et al., 2007). Within organizations, employees consistently assess actions and their consequences (Sharoni et al., 2012), underlining the potential influence of the organizational environment in shaping the outcomes of observing prosocial behaviors. Importantly, not all prosocial behavior is purely altruistic in nature (Richaud et al., 2012); for instance, some prosocial acts may be viewed as impression management tactics (Bolino et al., 2015), revealing the role of social perceptions in determining the underlying

motivations (Fiske et al., 2007). In high-pressure organizational cultures, where stress (Vagg & Spielberger, 1998) and cognitive load are heightened (Contreras & Gonzalez, 2021), the importance of the environment might even be further emphasized. Misinterpretations of the motives behind observed prosocial behaviors, seen through lenses of skepticism or perceived as strategic maneuvers (Barasch et al., 2014), may lead to adverse consequences on well-being and team-level outcomes, including performance (Podsakoff et al., 2014). Consequently, this study examines the boundary conditions that shape the effects of observing prosocial behaviors.

In the context of examining boundary conditions in observing prosocial behaviors, on the positive side, we examine social connectedness. Social connectedness, characterized by a sense of belongingness within social networks or relationships (Lee & Robbins, 1995), acts as a moderator for prosocial behaviors, enhancing their positive association with well-being (Hui et al., 2020). It also buffers against potential negative impacts on well-being by fostering high-quality colleague relationships (Bolino et al., 2015). However, on the negative side, the potential negative consequences of prosocial behaviors may stem from helping pressure, wherein the access to valuable resources and opportunities is threatened by the obligation to consistently aid coworkers (Bolino et al., 2015; Lin et al., 2019). In high-pressure environments that emphasize helping, observing others engage in prosocial behavior can exacerbate the perception of an obligatory culture of aid, thereby increasing stress and reducing personal well-being (e.g., Bolino et al., 2010; Weinstein & Ryan, 2010), due to the implicit expectation of participation in helping others. By exploring these moderators, this study aims to clarify how observing prosocial behavior impacts both positively and negatively employees' well-being and job satisfaction.

This study makes several significant contributions to the existing literature by expanding the scope of prosocial behavior research to include the observation of such behavior in the

workplace. Its primary contribution is filling a crucial gap in the field by focusing on observers of prosocial behaviors, thereby enhancing our understanding of how witnessing such acts impacts well-being and job satisfaction. While scientific literature on prosocial behavior and its outcomes has witnessed significant growth, it has primarily focused on the actors (e.g., Lanaj et al., 2016; Weinstein & Ryan, 2010) and the recipients (e.g., Bolino et al., 2015). However, a noteworthy gap remains in investigating prosocial behavior from an observational perspective, with only a few exceptions (see Chancellor et al., 2016). While extensive research has explored the positive consequences of prosocial behavior (e.g., Aknin et al., 2018), there is a need for more studies to delve into the observation of prosocial behavior and its potential positive and negative impact.

The second contribution of this study is its response to the call made by Bolino and Grant (2016) to investigate the conditions under which prosocial behavior leads to positive or negative outcomes. We argue that the effect of observing prosocial behavior is contingent on the social context at work. On one hand, a high sense of social connectedness can amplify the positive impact of observing prosocial behavior. High social connectedness augments the benefits of observing prosocial behavior through positive emotional contagion, suggesting that witnessing positive emotions can lead to their spillover, positively affecting observers (Barsade et al., 2018). On the other hand, in the presence of high helping pressure, the positive impact of observing prosocial behavior may diminish. Helping pressure shapes social norms, creating expectations to assist and support others (Bolino et al., 2015). This may lead to less positive effects since acting in a prosocial way under high helping pressure can reduce intrinsic motivation and autonomy to behave prosocially (Lin et al., 2019), negatively impacting the observer's well-being. Therefore, to better understand the effect of observing prosocial behavior on employee’s well-being and job

satisfaction, we investigated moderators linked to the social context at work, focusing on social connectedness and helping pressure.

Finally, in line with recent research emphasizing the significance of adopting a daily lens for prosocial behavior analysis (Lanaj et al., 2016), and showing that there are substantial daily fluctuations in prosocial behaviors (Koopman et al., 2016), we recognize the relevance of studying the observation of prosocial behaviors on a day-to-day basis. This approach allows us to capture within-person fluctuations in observing prosocial behaviors as well as their outcomes. Building on these insights, we adhere to their methodological approach to ensure coherence in our investigation of the observation of prosocial behaviors, therefore employing a multilevel analysis.

Theoretical Framework and Hypotheses Development

Observation of Prosocial Behavior and Well-being

Prosocial behaviors encompass a range of actions that benefit others, including helping, sharing, cooperating, and showing empathy (Bolino & Grant, 2016). These behaviors can be directed toward various recipients, such as coworkers, customers, teams, stakeholders, or the organization as a whole (Bolino & Grant, 2016). Numerous studies have linked prosocial behaviors to positive outcomes in the workplace. Engaging in prosocial behaviors has been associated with increased performance (Shukla & Kark, 2020), high well-being (e.g., Curry et al., 2018) and job satisfaction (Grant & Sumanth, 2009), and the fostering of cooperation and trust among colleagues (Brief & Motowidlo, 1986). Choosing to focus on well-being and job satisfaction as primary outcomes, this study aligns with existing research on the positive implications of engaging in prosocial behaviors, expecting similar beneficial effects from the observation of such behaviors.

Specifically, our focus centers on well-being (i.e., positive and negative affect) and job satisfaction. Observing prosocial behaviors often leads to the development of positive

interpersonal relationships within the workplace, serving as a fundamental mechanism for improving well-being and job attitudes (Varma et al., 2023). Such observations not only foster a sense of community and belonging among employees but also enhance trust and respect towards coworkers (Bolino and Grant, 2016). Furthermore, witnessing these acts allows individuals to internalize positive social norms and values, influencing their emotional connection to their job, positively impacting their well-being and satisfaction at work (Chancellor et al., 2016). Within the framework of Affective Events Theory (Weiss & Cropanzano, 1996), prosocial behaviors are regarded as affective events that influence employees' moods and attitudes. Observing such behaviors can induce positive emotional states because they embody acts of kindness, support, and cooperation, which are inherently positive to witness (Chancellor et al., 2016). These positive emotions, in turn, can enhance job satisfaction by fostering a sense of belonging and perceived support within the workplace (Bolino et al., 2002).

The social context plays a significant role in spreading prosociality and its consequences to those who observe (Chancellor et al., 2018). Social Learning Theory (Bandura, 1977) posits that individuals acquire new behaviors, attitudes, and emotional responses by observing others within their social context and noting the outcomes or consequences of these behaviors. When these behaviors are prosocial, the observers not only assimilate the actions themselves but also the positive outcomes these actions yield, including the satisfaction and positive emotions felt by both the giver and the receiver of prosocial acts. The concept of emotional contagion (Doherty et al., 1995), further intertwines with Social Learning Theory by explaining how emotions can be transmitted through observation. This means that the positive emotions displayed by someone engaging in prosocial behavior can be vicariously experienced by witnesses. Observers empathize with and, subsequently, mirror the emotional states of those they watch, leading to shared positive

feelings. Therefore, through the lens of SLT (Bandura, 1977), observing prosocial behavior not only teaches individuals about the value and impact of such actions but also, through emotional contagion (Doherty et al., 1995), allows them to experience the positive emotions associated with these actions vicariously.

Observing prosocial behaviors not only influences immediate social learning and emotional contagion but also evokes profound emotional experiences such as awe and elevation (Van Kleef & Lelieveld, 2022). These emotions, which fall within the spectrum of appreciation and self-transcendence, are associated with enhanced well-being and increased satisfaction (Van Kleef & Lelieveld, 2022). Finally, observing prosocial behavior toward others fosters one's belief that support will be available to oneself as well (Haber et al., 2007), which is linked to well-being (Wethington & Kessler, 1986). This perceived availability of social support not only enhances individual well-being but might also strengthens positive feelings towards one's job, contributing to greater job satisfaction (Mathieu et al., 2019). In sum, while the observation of prosocial behaviors remains relatively understudied, preliminary evidence suggests that observers experience better well-being (Chancellor et al., 2016). Based on these findings and theoretical reasoning, we propose the following hypothesis:

Hypothesis 1: Observing prosocial behaviors is (a) positively related to positive affect and job satisfaction and (b) negatively related to negative affect.

The Moderating Role of Social Connectedness

Building upon the understanding of how observing prosocial behaviors influences individual well-being and job satisfaction, the social context plays a pivotal role in shaping these effects. Social connectedness, defined as the sense of feeling connected to others (Lee & Robbins, 1995), plays an important role in the context of prosocial behaviors. On the one hand, when

individuals feel connected to others, they are more likely to engage in acts of kindness and cooperation (Pavey et al., 2012); on the other hand, engaging in prosocial behaviors enhances social connectedness, forming a virtuous cycle where acts of cooperation lead to increased prosocial behaviors in return (Hutcherson et al., 2008). We aim to particularly examine the role of social connectedness in shaping how employees respond emotionally to witnessing prosocial behaviors. Several factors come into play in this regard.

Firstly, the concept of positive emotional contagion suggests that witnessing positive emotions leads to their spillover, positively affecting observers (Barsade et al., 2018). This effect is particularly potent in contexts characterized by high social connectedness, where individuals are in close proximity to one another (Doherty et al., 1995). Prosocial behaviors and the emotional benefits they carry tend to spread through social networks that are characterized by close social proximity among the team members, hence social connectedness (Chancellor et al., 2016). Thus, social connectedness plays a moderating role in enhancing well-being and job satisfaction by amplifying the positive effects of observing prosocial behaviors.

Secondly, social connectedness fulfills the fundamental human need for a sense of belonging (Martela & Ryan, 2015). This sense of belonging makes individuals more likely to perceive the workplace as a conducive environment for well-being and job satisfaction. Moreover, individuals who engage in prosocial behaviors are often preferred as interaction partners due to their indication of being committed and resourceful group members (Hardy & van Vuygt, 2006). Therefore, especially in a highly socially connected organizational context, observing prosocial behaviors in the workplace reinforces individuals' perception of having a supportive network, ultimately contributing to enhanced well-being and job satisfaction.

Thirdly, the observation of prosocial behaviors in a highly connected workplace plays a key role in enhancing social capital. Social capital in organizations refers to the relationships that facilitate the exchange of resources, information, and influence, all crucial for job satisfaction (Bolino et al., 2002). When employees witness prosocial actions among colleagues, these observations build social capital, creating a valuable reserve of resources (Cameron et al., 2004). When individuals feel socially connected, they are more likely to observe and benefit from prosocial behaviors in their workplace. Observing prosocial behaviors strengthens the relationships that build and leverage social capital, thereby enhancing a sense of predictability, collaboration, and overall well-being, which collectively boost job satisfaction.

Finally, expectations of prosocial behavior and how people learn to interact within groups significantly influence how much group members value kindness and helpfulness (George & Bettenhausen, 1990), which is a key characteristic of social connectedness. When people are expected to be nice and learn to get along well in groups, they highly value kindness and helpfulness, both in their own actions and when observing others. In workplaces with strong social connectedness, this effect is even more pronounced. These environments are characterized by a shared identity and common goals among employees (Lee & Robbins, 1995). Observing prosocial behaviors in such settings strengthens interpersonal bonds and fosters a positive work climate (Lin et al., 2020). This, in turn, promotes increased cooperation and support among colleagues (Podsakoff et al., 2014). Consequently, employees in highly connected organizations experience enhanced social capital and a cooperative work atmosphere, which significantly boosts their well-being and job satisfaction. We therefore propose the following hypothesis:

Hypothesis 2: Social connectedness moderates the relationship between observed prosocial behaviors and positive affect, negative affect, and job satisfaction, such that, at

higher levels of social connectedness, (a) the relationships with positive affect and job satisfaction are stronger, and (b) the relationship with negative affect is weaker.

The Moderating Role of Helping Pressure

Building on the critical role of social context in shaping the impact of observed prosocial behaviors, helping pressure might play a significant role in either enhancing or reducing their positive effects. Helping pressure occurs in organizations where employees are incentivized and expected to engage frequently in helping behaviors (Bolino et al., 2015). This pressure fosters a culture of regular altruistic actions driven by both formal and informal rewards and the expectation of ongoing cooperation. However, a negative link exists between the compulsion to act prosocially and personal well-being (Rinner et al., 2022). In environments with high helping pressure, observing prosocial behaviors may reduce an individual's well-being and job satisfaction. This pressure creates a sense of obligation, making employees feel that not continuously supporting their colleagues could jeopardize their access to valuable resources and opportunities (Lin et al., 2019). Consequently, the observation of others' actions and their outcomes influences how helping pressure is perceived and how individuals interpret prosocial behaviors.

In observing prosocial behaviors, several arguments highlight the potential negative consequences of helping pressure on well-being. Firstly, the concept of competitive altruism explains how individuals compete to outdo each other in generosity to enhance their status and reputation (Hardy & Van Vugt, 2006). This competition can strain relationships, create unrealistic expectations, and devalue the true meaning of helping when driven by personal gain. In environments where the pressure to help stems from role expectations, peer influence, supervisory demands, or organizational culture, there is a heightened risk of viewing prosocial acts with skepticism (Barasch et al., 2014) and questioning their sincerity (Newman & Cain, 2014). This

skepticism can lead to cynicism (Berman & Silver, 2022), diminishing the positive perception and value of prosocial behavior. Observing prosocial actions that seem motivated by external pressures rather than genuine altruism can alter our perception of these acts, affecting both our emotional well-being and job satisfaction.

Secondly, individuals who engage in prosocial behavior sometimes experience a phenomenon known as 'do-gooder derogation,' where they face criticism from those who witness their acts of kindness (Pleasant & Barclay, 2018). This phenomenon occurs because observing others' altruistic behaviors can lead to negative self-evaluation (Parks & Stone, 2010). Observers may compare themselves to the prosocial individuals, which can threaten their own reputation and self-esteem (Kawamura & Kusumi, 2020) and result in negative affect. Observing prosocial behavior in a high helping pressure context might increase this do-gooder derogation, as it is interpreted even more negatively, thereby leading to decreased well-being and job satisfaction. Following this reasoning, we therefore propose the following hypothesis:

> Hypothesis 3: *Helping pressure moderates the relationship between observed prosocial behaviors and positive affect, negative affect, and job satisfaction, such that, at higher levels of helping pressure, (a) the relationships with positive affect and job satisfaction are weaker, and (b) the relationship with negative affect is stronger.*

Method

Participants and Procedure

Two hundred fifty-five employees working at least 60 percent of full-time employment (equivalent to minimum 25h/week) and not exclusively from home, were invited to participate in a diary study about organizational well-being with the help of Master's students. Participants were first sent a link by email to fill in a baseline questionnaire, in which reported demographic variables

and had to give their informed consent to take part in the study. At the beginning of the following week, they began completing daily surveys for two weeks (weekend excluded, thus 10 days). Each day, participants filled in the survey during lunchtime (response window of three hours) and at the end of their workday (response window of four hours). As compensation, at the end of the study, participants received individual feedback about their work situation and well-being and took part in the draw of gift cards.

One hundred eighty-two individuals filled in the baseline survey. Of them, 18 were excluded from the analyses due to providing insufficient data (i.e., completing less than three daily surveys) and 11 persons were excluded because they worked less than 25h per week or exclusively from home, resulting in a total sample of 153 participants who filled in 878 lunchtime and 886 end-of-work surveys.

In the final sample, 66 percent were women (33 percent were men, and one person was non-binary), age ranged from 18 to 70 years old (M = 36.76, SD = 12.94), mean tenure in the current job was of 6.89 years (SD = 8.32) and on average, participants worked 39.25 hours per week (SD = 7.04). With respect to educational degree, 36 percent had a high school diploma or below, 26 percent had a bachelor's degree, 34 percent has a master's degree and 4 percent had a PhD. A minority of them (49) had between 1 and 100 subordinates. Since our study investigates the influence of observing behaviors, we also assessed at the frequency of contact with other individuals at work in the baseline survey. Eight percent of our final sample usually have contact with 1-2 individual(s) per day, 28 percent with 3-5 persons, 29 percent with 6-10 persons, and 35 percent with more than 10 people per day.

Measures

All items were presented in French. The original English measures were translated and back-translated by a native English speaker (Brislin, 1970).

Observation of Prosocial Acts

Observation of prosocial acts was assessed with two items from Weinstein and Ryan (2010) that we adapted to the observer's perspective in the lunchtime and the end-of-work surveys. Participants had to indicate how often they observed (i) a member of the team (including the supervisor) and (ii) other members of the organization performing a prosocial act with the following items: "Indicate the extent to which you have observed, since the last survey: (i) members of your team or your supervisor / (ii) other members of the organization performing an act that involved helping someone else or doing something good (e.g., offering moral support, helping another person with their chores, bringing another person a coffee)''. Response format ranged from *0* to *10 (or more times)*.

Positive Affect

At the end of the workday, positive affect was assessed with six items from Watson et al.'s scale (1988). Response format ranged from *not at all* (1) to *extremely* (5). An example is: "Indicate the extent to which you feel now: happy.''

Negative Affect

At the end of the workday, negative affect was assessed with six items from McNair et al.'s scale (1971). Response format ranged from *not at all* (1) to *extremely* (5). An example is: "Indicate the extent to which you feel now: sad.''

Job Satisfaction

At the end of the workday, job satisfaction was assessed with one item from Fisher et al. (2016): "Today, to which extent are you satisfied with your job in general." Response format ranged from *not at all satisfied* (1) to *extremely satisfied* (8).

Social Connectedness

Social connectedness was measured in the baseline questionnaire with four items from Lee and Robbins (1995). Response format ranged from *strongly disagree* (1) to *strongly agree* (5). An example is: "In general, I feel close to people at work.''

Helping Pressure

Helping pressure was measured in the baseline questionnaire with eleven items from Settoon and Mossholder (2002). Response format ranged from *never pressured* (1) to *always pressured (5).* An example is: "How often do you feel pressured to behave in the following ways: Listen to people at work when they need to say something.''

Control Variable

Experienced Prosocial Behavior. Experience of prosocial acts was assessed with one item from Weinstein and Ryan (2010) that we adapted to the protagonist's perspective in the lunchtime and the end-of-work surveys. Participants had to indicate how often they experienced prosocial acts from people at work with the following items: ''Indicate the extent to which, since the last survey: People at work (colleagues, clients) have done something to help you or do something good for you''. Response format ranged from *0* to *10 (or more times).* Since receiving support is related with affect and job satisfaction (Mathieu et al., 2019), we controlled for experienced prosocial behaviors to differentiate between the impact of receiving and observing prosocial behavior.

Results

Means, standard deviations, intraclass coefficients, and zero-order correlations for the main variables are shown in Table 1. Given that we had nested data (multiple measures per employee), we conducted multilevel random coefficient modeling using the R package lme4 (Bates et al., 2014). The Level 1 variables (observed prosocial behavior, experienced prosocial behavior) were group mean-centered, whereas the Level 2 variables (social connectedness and helping pressure) were grand mean-centered. Intraclass coefficients indicate that there is a considerable amount of fluctuation in the observation and the experience of prosocial behaviors across days (ICC for observed prosocial behaviors = .74; for experienced prosocial behaviors = .69)

Table 2 presents the results from the multilevel analyses. Observing prosocial behaviors was positively associated with positive affect (B = 0.06, p = .045) supporting hypothesis 1a, and negatively associated with negative affect (B = -0.05, p = .034) supporting hypothesis 1b, but unrelated to job satisfaction (B = 0.07, p = .159). None of these effects were moderated by social connectedness or helping pressure, rejecting our hypotheses 2a and 2b and 3a and 3b.

Discussion

Our study investigates the dual impact - both positive and negative - of observing prosocial behaviors in the workplace. Our primary aim was to discern the influence of observing prosocial acts on employee well-being and job attitudes, contributing to a richer comprehension of workplace dynamics. Confirming our rationale, we found that observing prosocial behaviors was indeed associated with a significant positive effect on individuals' emotional experiences. Specifically, witnessing these acts was linked to heightened positive affect and a reduction in negative affect. These results underscore the emotionally uplifting influence of observing kindness in action, which not only elevates one's mood but also serves as emotional buffer against negativity.

Importantly, these effects persisted even when controlling for experienced prosocial behaviors, further highlighting the positive impact of simply observing prosocial behaviors. Nevertheless, while observing prosocial behaviors enhances immediate well-being, it does not affect job satisfaction. This absence of effect suggests that job satisfaction is more influenced by receiving support than by merely observing it, as experiencing prosocial behaviors directly predicts job satisfaction, unlike observation. Our findings therefore suggest that while job satisfaction may depend more on directly receiving support, observing prosocial behaviors has an even greater positive impact on well-being, underscoring the crucial role of the social environment in enhancing employee well-being.

The social context influences the spread of prosocial behaviors and their effects on observers (Chancellor et al., 2018), prompting our study to explore the moderating roles of social connectedness and helping pressure. Social connectedness proved to be beneficial, positively associated with job satisfaction and negatively associated with negative affect. This highlights the importance of positive relationships at work in boosting job satisfaction and reducing negative emotions. On the other hand, helping pressure had a harmful impact, being positively associated with negative affect, which underscores the emotional strain of feeling obligated to constantly help coworkers.

However, we did not find any interaction effects. For social connectedness, the absence of moderating effects might be because the emotional benefits of observing prosocial acts, such as increased positive affect and reduced negative affect, are experienced similarly by all individuals, regardless of their level of social connectedness within the organization Thus, whether someone is very socially connected or not, they will still experience the same emotional benefits from seeing prosocial behaviors, leading to consistent impacts on emotional well-being and job satisfaction. In

terms of helping pressure, our results suggest that the positive effects of prosocial behaviors might overshadow any potential moderating role of helping pressure. Alternatively, the interplay between these factors may be more complex and context-specific than our study could fully capture. Ultimately, our findings indicate the need for further research and emphasize the importance of fostering a positive workplace culture that promotes prosocial behaviors and underscores the role of interpersonal relationships in shaping employees' emotional well-being and job attitudes.

Theoretical and Practical Implications

Our study significantly contributes to the theoretical understanding of prosocial behaviors within the workplace. It addresses a critical gap in the existing literature by exploring the impact of observing prosocial acts, expanding our understanding beyond the traditional focus on engaging in and receiving such behaviors. This highlights the importance of considering the observer's perspective in the broader framework of prosocial behavior research. Social Learning Theory (Bandura, 1977) supports this by suggesting that individuals learn behaviors, attitudes, and emotional responses through observation. Our study contributes to this theory by emphasizing the importance of examining the observer's role, thereby deepening our understanding of Social Learning Theory and highlighting the importance of examining observers' roles in a range of workplace behaviors.

Our findings affirm the profound positive emotional impact of observing prosocial behaviors. The associations with increased positive affect and decreased negative affect underscore the emotionally uplifting influence of witnessing kindness in action. This aligns with the concept of emotional contagion (Doherty et al., 1995), which explains how emotions can be transmitted through observation, allowing observers to vicariously experience the positive emotions displayed by those engaging in or experiencing prosocial behavior. Our results further suggest that the

transmission of emotions through observation is a powerful mechanism, as these effects persist even when controlling for experienced prosocial behaviors, emphasizing the substantial influence of solely observing prosocial acts. This highlights the critical role of emotional contagion in shaping observers' emotional states, thus deepening our understanding of the theory.

Extending the understanding of emotional contagion, our study emphasizes the necessity of analyzing prosocial behavior on a daily basis, as highlighted by recent research (Lanaj et al., 2016). Our findings reveal considerable daily fluctuations not only in experiencing prosocial behaviors, replicating previous research (Koopman et al., 2016), but also in observing them. This suggests that the impact of prosocial behaviors is dynamic and varies significantly across days. Theoretically, this underscores the need to incorporate temporal variability into models of prosocial behavior to better understand their effects on employee well-being and job satisfaction, both as givers, recipients, and observers. Our approach aligns with and extends existing research by demonstrating that both observed and experienced prosocial behaviors have significant, variable impacts on emotional and job-related outcomes, highlighting the need to use multilevel analysis to account for this within-person fluctuation.

Our investigation delved into the role of social context by introducing variables such as social connectedness and helping pressure as potential moderators. Although we deepened our understanding of the complex relationship between observation, individual well-being, and job attitudes, it is important to note that we did not find any moderation effects in our study. Nevertheless, our findings emphasize the significance of social context in the formation of social capital and enhance our theoretical understanding of it. When employees witness prosocial actions among colleagues, these observations may build social capital, creating a valuable reserve of resources (Cameron et al., 2004). Observing prosocial behaviors strengthens relationships,

leveraging social capital and enhancing overall well-being. This underscores the vital role that observing prosocial acts plays in the workplace. Our study thus enriches social capital theory, demonstrating that observing prosocial behaviors contributes to its formation and associated benefits, highlighting the critical impact of social context.

From a practical standpoint, our research demonstrates that observing prosocial behaviors leads to increased well-being, creating an upward spiral of positive effects in the workplace. Encouraging employees to witness and acknowledge these acts can enhance positive affect and reduce negative affect, fostering an emotionally uplifting environment. This can be achieved by implementing recognition programs, such as Employee of the Month awards or peer-to-peer recognition, sharing stories of prosocial behaviors in team meetings, and creating platforms for publicly appreciating colleagues' helpful actions. This practice can foster a culture of kindness and cooperation, where positive moods lead to more frequent helping behaviors, exemplified by the "feel-good, do-good" phenomenon (Rosenhan et al., 1981). The resulting positive relationships at work can further amplify this effect, creating a cycle of well-being and altruism (e.g., Schnall et al., 2010; Thomson & Siegel, 2013). Additionally, when individuals receive acts of kindness or help, they are significantly more likely to perform similar actions for others, demonstrating a spillover effect of prosocial behaviors (Chancellor et al., 2018). Therefore, promoting the observation of prosocial behaviors can have substantial practical benefits, enhancing both individual and organizational well-being.

However, organizations should also be mindful of the potential challenges posed by helping pressure, which our study found to have a detrimental impact on emotional well-being, replicating previous research (e.g., Bolino et al., 2015). To address this, organizations can implement support mechanisms and resources, such as providing training on time management, offering mental health

resources, and establishing clear boundaries for assistance, to help employees manage and cope with the demands of assisting their coworkers, preventing negative emotional consequences. Our study's practical implications emphasize the importance of promoting positive workplace relationships, encouraging the observation of prosocial behaviors, and addressing potential challenges associated with helping pressure.

Limitations and Future Research

Our study has several limitations and suggests various directions for future research on observed prosocial behaviors. Although we emphasized the importance of social context, we did not examine conditions that might impair the observation of prosocial behaviors. For instance, in high time-pressure occupations, the heightened focus on immediate tasks may limit individuals' awareness of their surroundings, thereby reducing their likelihood of observing and being influenced by prosocial behaviors. Additionally, while we assessed the frequency of employee interactions on a typical day, we did not consider the nature or type of these interactions. Employees may have frequent contact with others but still be engaged in solitary tasks, resulting in fewer opportunities to observe prosocial behaviors, especially if they are not closely connected to the individuals involved or if the behaviors are irrelevant to their daily tasks. The type of job can also influence the impact of observing prosocial behaviors. For example, in roles focused on assisting others, observing prosocial behaviors might be routine. It would be interesting to investigate whether the impact is the same in jobs that are not inherently prosocial. Future research could explore the conditions and parameters affecting the observation and impact of prosocial behaviors, taking into account the working context and job type.

Given the importance of examining conditions influencing prosocial behaviors, an important limitation of our study is not accounting for the specific types of helping behaviors

observed, which previous research suggests can significantly impact outcomes. Lanaj and Jennings (2020) distinguished between personal and task-related helping behaviors, noting that personal helping fosters stronger interpersonal relationships, while task-related helping directly enhances job attitudes. Additionally, the distinction between informal and formal helping indicates differing impacts on well-being, with informal helping providing greater benefits to well-being (Hui et al., 2020). Our study's lack of consideration for these different types of prosocial behaviors may explain the absence of effects on job satisfaction. Therefore, future research should explore the consequences of different types of helping behaviors on observers within the workplace.

Moreover, our study did not account for the reasons behind helping behaviors, which could impact observers differently. Previous research indicates that proactive helping, unlike reactive helping, can be perceived as unnecessary or undermining, potentially harming recipients' self-esteem and autonomy, thereby affecting well-being differently (Lee et al., 2019). This oversight underscores the need for a comprehensive investigation into the types of observed prosocial acts and the motivations behind them, considering their effects on givers, recipients, and observers. Highlighting the negative aspects of support, an intriguing avenue for future research is the distinction between visible and invisible support within observed prosocial behaviors. According to Maisel and Gable (2009), visible support can heighten negative emotions, whereas invisible support does not lead to such effects. Future research could differentiate between visible and invisible support, rated by the giver or the observer, by examining situations where recipients are unaware of the support they receive while observers notice it, to explore the potential consequences on observers. This comprehensive approach can provide a deeper understanding of how various forms of prosocial behaviors impact employee well-being and job attitudes.

In addition, a limitation of our study is the lack of consideration for relationship dynamics, particularly power dynamics and hierarchy, within the observation of prosocial behaviors in the workplace. Research suggests that power dynamics can influence reactions to observed prosocial behaviors, potentially altering or diminishing their positive effects (Keltner et al., 2006). Future studies should explore how power dynamics and social context interact to affect the outcomes of observing prosocial behaviors. Additionally, group dynamics offer intriguing avenues for exploration, as workplace ostracism has been found to be related to prosocial behavior (Haldorai et al., 2022). For instance, individuals with high negative affect tend to exhibit cooperative and helpful behavior in response to ostracism (Liu et al., 2019). Investigating the implications of these dynamics on the interpretation and impact of observed prosocial behaviors can provide deeper insights into the complexity of workplace interactions.

Finally, the absence of interaction effects in our study highlights the importance of considering boundary conditions and suggests a promising direction for future research. Understanding how observation, emotions, and context interact can provide valuable insights into workplace dynamics. Future research should explore how workplace dynamics and organizational culture impact individual well-being and job attitudes, including factors such as gender (Eagly, 2009) and personality traits (Snippe et al., 2017). For example, Eagly (2009) found that women tend to engage in prosocial behaviors that are more communal and relational, while men are more likely to engage in agentic and strength-intensive behaviors. However, it remains unclear how these differences affect the observation of prosocial behaviors. By examining these boundary conditions, we can better understand how prosocial behaviors influence the workplace and develop strategies to create more positive work environments.

Conclusion

In conclusion, our study has paved the way for exploring the impact of observed prosocial behaviors on employee well-being and job attitudes within the workplace. We found that observing prosocial behaviors can enhance positive affect and buffer against negative emotions, even more than experiencing such behaviors. This highlights that while personal experiences impact how we feel about ourselves and our jobs, the actions and emotions of others also play a crucial role. Our study underscores the importance of fostering a workplace culture that encourages both giving and observing prosocial behaviors. Observing prosocial behaviors improves our well-being, so creating an environment where this is possible is essential. Observing prosocial behaviors makes us feel better, so we should definitely observe people - just be sure to keep it subtle and respectful!

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Table 1. *Means, Standard Deviations, ICC, and Correlations of the Measures*

Variables	*M*	*SD 1*	*SD 2*	*ICC*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Level 1											
1. Observation of prosocial acts	2.29	1.14	1.94	.74	(.68)	.46*	-.45*	.13*	.65*	-	-
2. Positive Affect	3.12	0.62	0.53	.41	.20*	(.89)	-.99*	.12*	.04*	-	-
3. Negative Affect	1.34	0.45	0.45	.45	.12	-.56**	(.83)	-.04*	-.01	-	-
4. Job Satisfaction	4.75	1.11	0.77	.32	.18*	.48**	-.40**	–	.14*	-	-
5. Experienced prosocial behavior	2.05	1.15	1.82	.69	.86*	.21*	.06	.22**	(.24)	-	-
Level 2											
6. Social connectedness	4.08	-	0.68	-	.07	.12	-.17*	.21**	.08	(.83)	-
7. Helping pressure	2.16	-	0.80	-	.10	-.09	.24**	-.15	.08	-.06	(.95)

Note. *SD*1 = standard deviation within-person, *SD2* = standard deviations between-person. *SD* and *ICC* are based on variance estimates of unconditional (null) models. Correlations above the diagonal reflect the within-person associations of the constructs. Correlations below the diagonal reflect the between-person associations of the aggregated measures. Numbers in the diagonal reflect the Cronbach's Alpha. For Level 1 variables, Cronbach's Alpha was calculated with the R shiny web applications: *https:// psychmethods.shinyapps.io/WithinPersonResearch,* developed by Yang et al. (2022)
Level 1 $N = 875$; Level 2 $N = 153$
** $p < .01$, * $p < .05$. Two-tailed tests

Table 2. *Unstandardized Coefficient Estimates for the Multilevel Analysis of Observed Prosocial Acts, Social Connectedness and Helping Pressure on Well-Being and Job Satisfaction*

	Positive Affect		Negative Affect		Job Satisfaction	
	B	*T*	*B*	*T*	*B*	*T*
Intercept	3.10*	64.16	1.37*	36.19	4.71*	64.53
Level 1						
Observation of Prosocial Acts	0.06*	1.99	-0.05*	-2.15	0.07	1.41
Experienced Prosocial Acts	0.06*	2.53	-0.01	-0.08	0.10*	2.03
Level 2						
Social Connectedness	0.09	1.28	-0.12*	-2.04	0.31*	2.84
Helping Pressure	-0.06	-1.05	0.15*	3.07	-0.12	-1.27
Observation of Prosocial Acts x Social Connectedness	0.02	0.70	-0.01	-0.02	-0.04	-0.70
Observation of Prosocial Acts x Helping Pressure	0.01	0.30	-0.04	-1.83	-0.06	-1.29

Note: *$p < .05$

Study 3

Title: **Navigating Tomorrow: The Impact of Task- and Social-Related Prospective Thoughts During Leisure Time on Well-Being and Work Engagement**

Short title: *Prospective Thoughts*

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Abstract

Employees often continue to think about their job during leisure time, prompting research into the impact of these work-related thoughts on well-being. While most studies focus on past thoughts, this study delves into prospective thoughts, examining how looking forward affects employees. We distinguish between positive and negative, as well as task- and social-related prospective thoughts, investigating their unique effects on well-being and work engagement while controlling for retrospective thoughts. Additionally, we explore how work centrality, the importance of work in one's life, moderates these effects. Utilizing a two-week daily diary study (N = 127), we found that positive prospective thoughts were associated with reduced morning fatigue, enhanced recovery, and higher levels of work engagement, while negative thoughts had a lesser but still adverse effect, namely on increased bedtime and next morning fatigue. Our results showed a stronger influence of task-related thoughts over social-related ones on well-being and work engagement, highlighting the importance of differentiating these types of prospective thoughts in predicting employee outcomes. This study challenges the conventional emphasis on retrospective thoughts, providing a nuanced understanding of the role of the importance, the valence, and the typology of prospective thoughts in employee well-being and work engagement.

Keywords: prospective thoughts, well-being, work engagement, recovery, work centrality.

Navigating Tomorrow: The Impact of Task- and Social-Related Prospective Thoughts During Leisure Time on Well-Being and Work Engagement

After leaving the workplace in the evening, work often continues to occupy employees' minds, prompting work psychology to explore the effects of work-related thoughts during leisure time on well-being (Wendsche & Lohomann-Haislah, 2017). The significance of these thoughts is underscored by meta-analyses showing that negative reflections impair recovery, well-being, and work engagement, whereas positive reflections have beneficial effects (Jimenez et al., 2022). Prior studies examining work-related thoughts, focusing on concepts like rumination and detachment (e.g., Fritz & Taylor, 2020; Pauli et al., 2023), often employed broad measures that lack a specific time frame encompassing both retrospective and prospective thoughts (e.g., Song et al., 2023; Wendsche et al., 2021). Additionally, many of these studies have focused exclusively on retrospective thoughts (e.g., Blanco-Encomienda et al., 2020; Wang et al., 2013). However, prospective thoughts generally impact differently well-being than retrospective thoughts, particularly in terms of their effects on arousal (Baumeister et al., 2020), with prospective thoughts being more stimulating and energizing. When studying the impact of work-related thoughts, it is thus crucial to consider the timeframe.

Unfortunately, studies on prospective work-related thoughts – defined as "deliberate or spontaneous conscious thoughts about future work" (Rutten et al., 2022, p. 923) – are scarce (for exceptions, see Rutten et al., 2022; Sonnentag & Wiegelmann, 2024). However, prospective thoughts are more prevalent than retrospective ones, with individuals engaging in a wide range of future-oriented thoughts daily, from 10 to 150 thoughts, both in laboratory settings and in daily life (Kvavilashvili & Rummel, 2020). In the workplace, people frequently engage in these prospective thoughts, which are likely important for well-being and job attitudes (Rutten et al., 2022). Since work situations inherently involve uncertainty about future events, individuals tend

to anticipate and foresee potential scenarios (Casper & Sonnentag, 2020). Engaging frequently in prospective thinking helps individuals navigate these uncertainties, positively impacting their well-being and engagement. Therefore, despite the scarcity of research on prospective thoughts, their prevalence and importance necessitate further exploration of their different forms and impacts on well-being and job attitudes, continuing the work of Rutten et al. (2022).

We examine the impact of future-oriented thoughts and emphasize the importance of distinguishing various forms of work prospection, which do not uniformly relate to recovery outcomes. Building upon Rutten et al.'s work (2022), we differentiate between positive and negative thoughts. Extending this line of research, we make three significant contributions to the literature. Our first contribution further categorizes prospective thoughts into social and task-related, as recommended by Wendsche et al. (2021). Task thoughts involve job tasks and challenges, while social thoughts focus on workplace interactions, and we aim to reveal their effects on well-being. By controlling for retrospective thoughts, we isolate the effects of prospective thoughts, ensuring that any observed impacts on well-being are specifically due to future thoughts rather than reflections on past events. To achieve this, we use a diary study to account for temporal dynamics, capturing fluctuations in the frequency, nature, and impacts of both social and task-related, positive and negative prospective thoughts over time.

Secondly, we investigate a potential moderator that influence the relationship between prospective thoughts and well-being, understanding the factors that contribute to employees' high or low well-being (Casper & Sonnentag, 2020). Specifically, we examine work centrality, which is defined as the importance of work in an individual's life (Paullay et al., 1994). Individuals with high work centrality integrate their work into their identity, making their well-being more susceptible to the influence of work events, such as interpersonal stressors (Li et al., 2020), and

arguably also to work-related thoughts. By considering work centrality as a moderator, we examine how the significance of work in one's life can amplify or mitigate the effects of prospective thoughts on well-being.

Thirdly, our study extends the range of outcomes examined beyond the well-being measures used in Rutten et al. (2022), which included fatigue, recovery, and sleep quality. We also investigate work engagement to provide a more holistic understanding of the impacts of prospective thoughts. There is already evidence suggesting positive work-related thoughts enhance work engagement (Jimenez et al., 2022). Our aim is to elucidate how different types of prospective thoughts influence an individual's level of engagement in their work. By broadening the spectrum of outcomes to include work engagement, our study offers practical strategies for enhancing employee engagement and well-being in the workplace.

Theoretical Framework and Hypotheses Development

For a long time, scientific knowledge held that work-related cognitions during leisure time undermine day-to-day recovery from work (Sonnentag et al., 2017). Emphasis was placed on the importance of psychological detachment due to its strong negative association with burnout and fatigue and its positive relationship with various well-being outcomes, such as life satisfaction, state of recovery, and affective well-being (Wendsche & Lohmann-Haislah, 2017). However, it is possible to detach and recover even in the presence of work-related thoughts; the key factor is the content and affective valence of these thoughts (Cropley & Zijlstra, 2011; Meier et al., 2016). This highlights the importance of understanding not just whether employees think about work during leisure time, but what they are thinking about and how these thoughts make them feel.

The valence of work-related thoughts significantly impacts well-being. Negative past thoughts have detrimental effects, as evidenced by meta-analyses showing that rumination predicts poor

well-being (Blanco-Encomienda et al., 2020) and negative work-related thoughts predict burnout and poor well-being (Jimenez et al., 2022; Firoozabadi et al., 2018). According to the perseverative cognition hypothesis (Brosschot et al., 2006), the inability to switch off from work prolongs psychophysiological activation, akin to that caused by the stressor itself. This mental activation may occur when relevant goals are not met or when emotional experiences do not align with desired outcomes (Watkins, 2008). Such activation tends to persist (Wang et al., 2013), leading to increased job-related thoughts in the evening, which impedes resource replenishment, increases symptoms of strain, and prevents psychological detachment from work (Blanco-Encomienda et al., 2020). Conversely, positive thoughts have beneficial impacts. Meta-analyses indicate that positive work-related thoughts predict high well-being and work engagement (Jimenez et al., 2022). Specifically, positive work reflection is associated with lower exhaustion and higher affective well-being (Meier et al., 2016). The mechanism behind this involves recalling positive events, which triggers positive emotions (Morris, 1989) and amplifies the positive consequences of the event through savoring (Bryant, 1989). Positive emotions are also known to accelerate recovery from negative emotional arousal (Fredrickson et al., 2000), suggesting that positive work reflection can reduce negative affect. This highlights how our thoughts can shape our well-being.

Work-related thoughts can refer to either the past or the future. Although these thoughts often co-occur, they are distinct concepts. Rumination and anticipatory thinking exhibit only a moderate relationship with each other (r =.22) (Song et al., 2023). Rutten et al. (2022) reported a moderate correlation between rumination and positive prospective thoughts ($r = -.34$) but a higher correlation between affective rumination and negative prospective thoughts (r = .75). Their analysis revealed that work prospection – both positive and negative – is empirically distinct from retrospective thoughts. Distinguishing between these thoughts is crucial because they can have

different impacts. As suggested by Baumeister et al. (2016), prospective thoughts may have a stronger impact than retrospective ones because the future can be influenced and changed, whereas the past cannot. These thoughts engage unique psychological processes, such as planning and anticipation mechanisms (Baumeister et al., 2016), which motivate individuals by setting goals and creating a vision for the future, essential for motivation and engagement. Positive prospective thoughts can be uplifting, boosting well-being and fostering positive affect through hope and optimism. Planning also prepares individuals for upcoming stressors, serving as an anticipatory coping strategy (Watkins, 2008).

On the contrary, negative anticipatory cognitive appraisal has been shown to significantly impact well-being, explaining more variance than personality factors or retrospective stress appraisal (Gaab et al., 2005), and triggers an immediate and intense stress response. Stress reactions often involve an anticipatory phase, where mental representations of future stressors can lead to immediate fatigue (Brosschot et al., 2006; Lazarus & Folkman, 1984). Anticipating stressful events can trigger affective and physiological reactions, contributing to overall stress (Feldman et al., 2004; Gaab et al., 2005; Waugh et al., 2010). Perseverative cognition, such as worry, extends stress-related physiological activation, impacting health (Brosschot et al., 2006). Evening work-related worry has been linked to poor sleep (Pereira et al., 2013) and increased exhaustion the following morning (Casper & Sonnentag, 2020). Understanding these dynamics underscores the importance of future-oriented thinking in shaping well-being and engagement.

Positive and Negative Prospective Thoughts

Like work-related retrospective thoughts, prospective thoughts can be either positive or negative, each having different impacts on recovery and well-being (Rutten et al., 2022). Positive future thoughts can replenish or expand employees' energetic resources, aligning with

Fredrickson's (2001) broaden-and-build theory, which suggests that positive emotions broaden thought and action repertoires, whereas negative emotions narrow these repertoires for quick action. As a result, positive and negative prospective thoughts might prompt employees to engage in different behaviors, which in turn impact recovery processes and well-being. Watkins (2008) found that positive thoughts resulted in recovery from upsetting events, adaptive preparation, and health-promoting behaviors, while negative prospective thoughts resulted in avoidance or withdrawal behaviors. Moreover, positive thoughts are strongly related to day-level positive affect (Eichberger et al., 2021), impacting overall well-being (Gentzler et al., 2016). The valence of prospective thoughts thus impacts energetic resources; negative affective prospection drains resources and leads to fatigue, while positive affective prospection benefits sleep quality and recovery (Rutten et al., 2022).

The extent and valence of work prospection fluctuate daily. Work-related thoughts exhibit state-like fluctuations (Syrek & Antoni, 2014), with substantial within-person variance in positive and negative work prospection (Rutten et al., 2022). Focusing on day-level measurement of prospective thoughts and outcomes, we suggest that evening work-related thoughts, such as anticipating the next days, can impact well-being and engagement the following morning. Therefore, we examine the daily effects of prospective thoughts on recovery outcomes, building on Rutten et al. (2022) by focusing on fatigue, recovery, and sleep quality. Additionally, we include work engagement as an outcome, supported by evidence that positive work-related thoughts enhance work engagement (Jimenez et al., 2022). We also control for retrospective thoughts to isolate the effects of prospective thoughts. Notably, Rutten et al. (2022) did not control for retrospective thoughts in most studies, finding effects of prospective thoughts, while Sonnentag and Wiegelmann (2024) did control for them and found no effects of future-oriented thoughts on

well-being. Based on theory and previous empirical findings, we postulate the following hypotheses:

H1a and H1b: Controlling for retrospective thoughts, (a) positive prospective thoughts have a positive effect and (b) negative prospective thoughts have a negative effect on well-being (i.e., recovery, sleep quality, and low levels of fatigue) and work engagement.

Building upon the effects of prospective thoughts' valence, we extend our investigation to examine their differential impact on well-being. According to the conservation of resources theory, resource loss has a more significant impact on well-being than resource gain, with the stress from losing resources being much more intense than the satisfaction from gaining them (Hobfoll, 1989). Similarly, prospect theory postulates that anticipated losses loom larger than gains, meaning the pain of losing something is psychologically more powerful than the pleasure of gaining something of the same value (Kahneman & Tversky, 1979). In the workplace, anticipated negative outcomes (losses) may have a more substantial impact on an employee's well-being than anticipated positive outcomes (gains). Meta-analytical findings show that negative work-related thoughts are more strongly and negatively related to well-being than positive work-related thoughts are positively related to well-being (Jimenez et al., 2022). This aligns with the 'bad is stronger than good' adage, suggesting that negative experiences outweigh positive ones (Baumeister et al., 2001).

Based on this reasoning, we postulate the following hypothesis:

H1c: Negative prospective thoughts have a stronger effect on well-being than positive prospective thoughts.

In contrast, we anticipate that positive thoughts will have a stronger positive effect on work engagement than negative thoughts will have a negative effect. Work engagement, defined as "a positive affective-motivational state" and "the outcome of positive emotions" (Salanova et al., 2010, p. 126), can be triggered by positive work-related thoughts (Jiang & Johnson, 2018). Meta-analytical findings support this, showing that positive work-related thoughts are more strongly related to work engagement than negative work-related thoughts (Jimenez et al., 2022). Based on this reasoning, we postulate the following hypothesis:

H1d: Positive prospective thoughts have a stronger effect on work engagement than negative prospective thoughts.

Social and Task-Related Prospective Thoughts

Following Wendsche et al. (2021)'s suggestion to study different types of work-related thoughts, we differentiate between task-related and social-related prospective thoughts, as previous research found that distinct types of thoughts are related to different outcomes (Weigelt et al., 2019). Task-related thoughts refer to professional tasks, projects, and responsibilities, including thoughts about assigned tasks, progress, deadlines, and project duties. Conversely, social-related thoughts involve interactions with colleagues, supervisors, subordinates, and clients, encompassing both work-related and personal interactions. Most research on work-related thoughts has either not distinguished the content of these thoughts (e.g., Jimenez et al., 2022; Meier et al., 2016) or focused exclusively on task-related thoughts (Firoozabadi et al., 2018; Weiher et al., 2022). For future-oriented thoughts, the focus has primarily been on task-related content (Casper & Sonnentag, 2020; Flaxman et al., 2023; Kawagoe & Kase, 2021) or has not differentiated between social and task thoughts (Baumeister et al., 2016; Rutten et al., 2022; Sonnentag & Wiegelmann, 2024).

Distinguishing between task-related and social-related prospective thoughts is crucial because they may influence well-being and engagement in distinct ways. Social stressors like interpersonal conflicts are the most distressing daily stressors and account for over 80% of the changes in daily mood (Bolger et al., 1989). Further underscoring their significance, interpersonal tension is the most common class of stressors (Almeida et al., 2002). At work, personal social interactions, although less frequent than task-related interactions, are perceived as more personally meaningful (Tschan et al., 2004) and may thus have a greater impact on well-being. Similarly, relationship-oriented use of social media increases job satisfaction, unlike task-oriented use (Wang, 2023). These findings underscore the need to distinguish between task-related and social-related prospective thoughts, as social thoughts may have a greater impact on well-being.

Building on this idea, Wang et al. (2020) found that recognition events, representing positive social-related prospective thoughts, had a stronger impact on relatedness need satisfaction, while achievement events, representing positive task-related prospective thoughts, had a stronger impact on competence need satisfaction. Both types of positive work events indirectly affected work engagement through their respective impacts on competence and relatedness need satisfaction. This demonstrates how both social and task-related thoughts are crucial for shaping workplace well-being and engagement. While social thoughts primarily relate to the satisfaction of relatedness, task-related thoughts are more associated with competence (Deci & Ryan, 2000). Based on this distinction, we differentiate not only between positive and negative thoughts but also between task- and social-related thoughts. Consequently, we postulate the following hypotheses:

H2a to H2d: Controlling for retrospective thoughts, positive (a) task- and (b) social-related prospective thoughts have a positive effect on well-being and work engagement, while

negative (c) task- and (d) social-related prospective thoughts have a negative effect on well-being and work engagement.

In an *exploratory manner*, we test whether task- and social-related thoughts have a different impact on well-being and work engagement.

Work Centrality

We explore potential boundary conditions and recognize individual differences in how thoughts affect well-being, specifically examining the role of work centrality. Work centrality refers to the value and importance of work in one's life (Hirschfeld & Field, 2000). Individuals with high work centrality integrate work into their identity and hence think more about work and tend to ruminate, which can impede their leisure and personal life (Cropley & Millward, 2009). Of particular importance, the fact that they integrate work more strongly into their identity also makes their well-being more susceptible to the influence of work events (Li et al., 2020), and arguably so, work-related thoughts. In line with this reasoning, work centrality moderates the relationship between social stressors (e.g., incivility, bullying, abusive supervision) and well-being, with high work centrality amplifying the negative impact of stressors (Li et al., 2020). Similarly, work-related boredom is more strongly related to poor well-being at the end of the workday and in the evening for employees with high work centrality (Van Hooff & Van Hooft, 2016). Based on this reasoning, we postulate the following hypothesis:

H3: Work centrality moderates the effect of prospective thoughts on well-being and work engagement; the effect is stronger among individuals with high (compared to low) work centrality.

Method

Transparency and Openness

Data and code are available on the Open Science Framework (OSF). The present research was preregistered *(https://osf.io/p325r)*.

Participants and Procedure

One hundred and ninety-five employees working in various professional organizations in Switzerland, working at least 60 percent of full-time employment (equivalent to a minimum 25h/week) with regular working hours (i.e., no shift work) were invited to participate in a diary study with the help of Master's students (i.e., student-recruited sampling method; see Demerouti & Rispens, 2014). Participants were first sent a link by email to fill in a baseline. At the beginning of the following week, they began to complete three daily surveys for two weeks (weekend excluded, thus 10 days). Each day, participants filled in the survey in the morning, at the end of the workday, and before going to bed. The morning questionnaire was sent at 6 a.m. and was accessible until 10 a.m. with the instruction to fill it in when waking up, before attending work. The end-of-work questionnaire was sent at 4 p.m. and was accessible until 8 p.m., with the instruction to fill it in when finishing work. Finally, the bedtime questionnaire was sent at 9 p.m. and was accessible until 2 a.m., with the instruction to fill it in before going to bed. As compensation, at the end of the study, participants received individual feedback about their work situation and well-being and took part in the draw of gift cards.

One hundred fifty-two individuals filled in the baseline survey. Of them, 18 were excluded from the analyses due to providing insufficient data (i.e., completing less than one full day of daily surveys, meaning completing one day of morning, end-of-work, and bedtime surveys), four persons were excluded because they did not fill any daily surveys, and three persons were excluded

because they worked less than 20h per week, resulting in a total sample of 127 participants who filled in 977 morning, 946 end-of-work, and 1029 bedtime surveys.

In the final sample, 61 percent were women and 39 percent were men, age ranged from 21 to 63 years (M = 37.35, SD = 11.71), mean tenure in the current job was 8.08 years (SD = 9.15), and on average, participants worked 39.20 hours per week (SD = 7.14). With respect to educational degree, 35 percent had a high school diploma or below, 28 percent had a bachelor's degree, 34 percent had a master's degree, and 3 percent had a PhD. A minority of them (38) had between 1 and 100 subordinates.

Measures

All items were presented in French. We applied Brislin's (1970) back-translation method.

Prospective Thoughts

At bedtime, prospective thoughts were assessed with an adapted 8-item scale from Rutten et al. (2022). We modified Rutten et al.'s positive and negative affective prospective items to differentiate between task- and social-related thoughts. All types of thoughts (positive and negative task-related thoughts and positive and negative social-related thoughts) were measured with two items each. Example items for task-related thoughts were: "Today after work, I was looking forward to the tasks or projects ahead of me." and "Today after work, I worried about the upcoming set of tasks or projects I need to complete."; example items for social-related thoughts were: "Today after work, I was looking forward to the social interactions at work ahead of me" and "Today after work, I worried about how to deal with other people at work in the coming days". Response format ranged from *strongly disagree* (1) to *strongly agree* (5).

State of Being Recovered in the Morning

In the morning, recovery was assessed with four items from Sonnentag and Kruel (2006). An example was: “This morning, I feel well rested.” Response format ranged from *not at all* (1) to *extremely* (5).

Sleep Quality

In the morning, sleep quality was assessed with one item from the Pittsburgh Sleep Quality Index by Buysse et al. (1989): “How would you evaluate the quality of your sleep last night?” Response format ranged from *very weak* (1) to *very good* (5).

Fatigue

At all three measurement occasions per day, fatigue was assessed with three items from Cranford et al. (2006). An example was: “Indicate the extent to which you feel now: fatigued.” Response format ranged from *not at all* (1) to *extremely* (5).

Work Engagement

In the morning and at the end of work, work engagement was assessed with three items from Schaufeli et al. (2019). For the morning questionnaire, an example was: “Right now, I am passionate about my job.”; for the end of work survey, the same item is: “Today at work, I was passionate about my job.” Response format ranged from *not at all* (1) to *extremely* (5).

Work Centrality

Work centrality was assessed in the baseline questionnaire with 12 items from Paullay et al. (1994). An example was: “The major satisfaction in my life comes from my work.” Response format ranged from *strongly disagree* (1) to *strongly agree* (7).

***Retrospective Thoughts (as Control Variables*)**

At bedtime, retrospective thoughts were assessed with an adapted single-item measure from Matthews et al. (2022). As for prospective thoughts, we captured positive and negative past-related thoughts, both with regard to task and social aspects, resulting in four items. An example was: "Did you think about any positive task-related things that have happened at work?" Response format ranged from *not at all* (1) to *extremely* (5).

Results

Means, standard deviations, intraclass coefficients, and zero-order correlations for the main variables are shown in Table 1. Given that we had nested data (multiple measures per employee), we conducted multilevel random coefficient modeling using the R package lme4 (Bates et al., 2014). The Level 1 variables (e.g., prospective thoughts) were group mean-centered, whereas the Level 2 variable (work centrality) was grand mean-centered. Intraclass coefficients indicate that there is a considerable amount of fluctuation in prospective thoughts (ICC = .62 for positive prospective thoughts, ICC = .52 for negative prospective thoughts, ICC = .60 for positive task prospective thoughts, ICC = .56 for positive social prospective thoughts, ICC = .56 for negative task prospective thoughts, and ICC = .52 for negative social prospective thoughts).

The main focus of the analyses is on the within-person effect of prospective thoughts on well-being and work engagement (Hypotheses 1 and 2). To model change in the outcome and to rule out that the effect of prospective thoughts can be explained by retrospective thoughts, we control for the outcome at the previous measurement occasion (for work engagement and fatigue, the end of work measure, and for recovery and sleep quality, the morning measure) and retrospective thoughts (bedtime measure). We modeled the effects of prospective thoughts as random slopes; however, to reduce model complexity, the effects of control variables were

modeled as fixed slopes, and separate models were run for each outcome. All tests of statistical significance were conducted at an alpha level of .05. Results from multilevel regression analyses appear in Table 2 and Table 3.

Positive vs. Negative Prospective Thoughts

Consistent with Hypotheses 1a and 1b, positive prospective thoughts influenced well-being and work engagement, as evidenced by their effect on fatigue (B = -0.10, p = .026), recovery (B = 0.19, p = .002), and work engagement (B = 0.12, p < .001) in the next morning, even when controlling for retrospective thoughts. Interestingly, while not reaching conventional levels of statistical significance, there was a trend indicating that positive prospective thoughts were also related to better sleep quality and reduced fatigue at bedtime, respectively (B = 0.10, p = .054) and (B = -0.06, p = .090).

Conversely, negative prospective thoughts had a less pronounced impact on our well-being outcomes. Although they were positively related to fatigue in the next morning (B = 0.10, p = .046) and at bedtime (B = 0.12, p = .009), suggesting a detrimental effect on both concurrent and next morning well-being, but there were no significant effects on next day's recovery, sleep quality, and work engagement, partially infirming Hypotheses 1a and 1b.

Furthermore, the moderator effect of work centrality (Hypothesis 3) was tested with cross-level interaction effects. All in all, we found no evidence for Hypothesis 3. Work centrality did not moderate any of the effects of prospective thoughts on well-being and work engagement.

To test the differential effects of positive and negative prospective thoughts (Hypotheses 1c and 1d), we compared the relative importance of the predictors by calculating the Pratt index

(Liu et al, 2014; for an empirical example, see Tuckey et al., 2022). The Pratt index[3] suggest that for recovery and sleep quality, positive prospective thoughts explain more variance than negative thoughts, with 71% for positive thoughts against 19% for negative thoughts for recovery, and 57% for positive thoughts against 24% for negative thoughts for sleep quality. For fatigue, both in the morning and at bedtime, the difference was less pronounced, with 40% positive against 20% negative in the morning, and 2% positive against 5% negative at bedtime. Overall, even though the difference for fatigue is less clear, for recovery and sleep quality, positive prospective thoughts seem to have a stronger effect on well-being than negative prospective thoughts, contradicting our rationale and hypothesis 1c. For work engagement, the Pratt index revealed that positive prospective thoughts explain more variance than negative thoughts, with 71% for positive thoughts compared to 2% for negative thoughts, confirming our hypothesis 1d. Our findings highlight the differential impact of prospective thoughts, specifically emphasizing that positive thoughts have a stronger effect on well-being and work engagement than negative ones.

Social- vs. Task-Related Prospective Thoughts

Regarding the differentiation between social- and task-related prospective thoughts, the results from multilevel regression analyses appear in Table 3. Positive task-related prospective thoughts emerged as a significant predictor of several well-being indicators. Specifically, these thoughts significantly predicted improved sleep quality (B = 0.14, p = .006) and recovery (B = 0.23, p < .001), and were associated with reduced morning fatigue (B = -0.13, p = .005). Moreover, positive task-related prospective thoughts were also positively associated with work engagement the next morning (B = 0.09, p = .040). Regarding negative effects, negative task-related prospective

[3]The Pratt Index cannot formally test if one predictor explains more variance than another, but it shows each predictor's contribution to the explained variance in a multilevel model.

thoughts were negatively associated with sleep quality (B = -0.10, p = .034) and showed a trend toward increasing fatigue in the morning (B = 0.07, p = .096), at bedtime (B = 0.06, p = .084), as well as on impaired recovery (B = -0.10, p = .081), partially supporting H2c. Contrary to our expectations, social-related prospective thoughts, both positive and negative, did not predict well-being and work engagement, diverging from Hypotheses H2b and H2d.

In sum, our analyses provide partial support for our hypotheses, notably revealing the positive effect of positive task-related prospective thoughts. The complex impact of prospective thinking is highlighted by the nuanced effects of negative task-related thoughts and the lack of significant impact from social-related thoughts.

Discussion

This study aimed to explore the effects of prospective work-related thoughts during leisure time on employee well-being and work engagement. Distinguishing between positive and negative, as well as task- and social-related thoughts, we aimed to provide a nuanced understanding of how these thoughts during leisure time impact employees' post-work recovery and engagement.

Firstly, our findings reveal that prospective are related to well-being and work engagement, even when controlling for retrospective thoughts. This extends our understanding of their importance and builds on the work of Rutten et al. (2022) and Sonnentag and Wiegelmann (2024), pioneers in studying future-oriented work-related thoughts. Unlike previous studies, we demonstrate that prospective thoughts have a stronger relationship with well-being than retrospective thoughts, offering a nuanced understanding of their importance. Rutten et al. (2022) did not control for past thoughts, and Sonnentag and Wiegelmann (2024) found no relationship between future-oriented cognitions and affective outcomes; instead, only backward-oriented

negative rumination predicted affect the following day. Given that we included both positive and negative affect in our measures, we conducted additional analyses and, contrary to their findings, we found significant effects of prospective thoughts on affect. Specifically, we found an effect of both positive and negative prospective thoughts on next morning positive affect, respectively (B = 0.19, $p < .001$) and (B = -0.13, p = .007), as well as a negative association between negative prospective thoughts and next morning negative affect (B = 0.06, p = .005). Our findings therefore underscore the unique value of focusing on prospective thoughts in predicting recovery, affect, and work engagement, challenging the traditional emphasis on retrospective thoughts.

Secondly, our study revealed that the valence of prospective thoughts is crucial in understanding their impact on well-being and work engagement. Confirming our hypotheses, positive prospective thoughts reduce morning fatigue, enhance recovery, and foster higher levels of work engagement. This aligns with research on retrospective thoughts, which shows that positive reflections on work are associated with diminished exhaustion and improved affective well-being (Meier et al., 2016), and that reminiscing about positive work experiences can bolster both psychological and physical health (Bono et al., 2013). Looking forward to favorable future work scenarios similarly uplifts individuals. A meta-analysis further supports this by demonstrating the profound impact of personal resources on recovery (Steed et al., 2019), suggesting that positive prospective thoughts could serve as personal resources crucial for rejuvenating employees' energetic reserves. Our results thus align with the broaden-and-build theory (Fredrickson, 2001), illustrating that positive emotions - and by extension, positive thoughts - can enhance well-being and work engagement. Although negative prospective thoughts were anticipated to have substantial adverse effects, their impact was less significant than expected, primarily influencing increased bedtime and next morning fatigue, challenging the conventional

belief that negative experiences outweigh positive ones (Baumeister et al., 2001). Interestingly, our findings reveal a significant tendency for individuals to engage more frequently in positive (M = 2.93) than negative prospective thoughts (M = 1.77, $p < .001$). These observations emphasize the importance and beneficial impact of positive prospective thoughts.

Thirdly, extending previous research, our study further reveals that the typology of prospective thoughts also matters. We found a pronounced emphasis on task-related prospective thoughts over social-related ones, aligning with literature that suggests individuals often prioritize forthcoming tasks and plans (Kvavilashvili & Rummel, 2020). This focus is likely intensified by our work-centered framing, leading to a greater impact of task-related thoughts on the outcomes measured. Such an orientation towards planning and future task contemplation (Baumeister et al., 2016), underscores the prevalence and significance of task-related thoughts in shaping well-being and engagement. Specifically, we observed that positive task-related thoughts are associated with improved sleep quality, recovery, and morning fatigue but also enhance next morning work engagement. This suggests that envisioning positive outcomes for upcoming work tasks serves as a beneficial psychological resource, resonating with research linking problem-solving pondering to elevated work engagement (Bennett et al., 2018). These thoughts bolster a sense of competence and self-efficacy, fostering achievement and fulfillment, and satisfying competence needs, which indirectly boosts work engagement (Wang et al., 2020). Conversely, negative task-related thoughts exert a more nuanced influence, with trends indicating adverse effects on sleep quality and increased bedtime fatigue.

Finally, our moderation analysis showed no effect for work centrality. This finding diverges from our initial expectations based on previous studies suggesting a pronounced role of work centrality (Li et al., 2020). This discrepancy indicates that more research is needed to

understand when and how work centrality affects work-related thoughts. Specifically, it would be interesting to explore whether, for individuals high in work centrality, work events have a stronger impact on their prospective thoughts. Future research should examine the prevalence and importance of work events and work centrality on prospective thoughts, rather than focusing solely on the direct influence of thoughts on outcomes.

Practical and Theoretical Implications

The present findings offer practical and theoretical implications. From a practical standpoint, organizations can offer reflection training programs that encourage employees to engage in positive future-oriented thinking about work tasks and mindfulness training. Reflection training can include exercises like the "three good things" intervention, which encourages participants to reflect on and write down three positive events from their day to improve well-being (Seligman et al., 2005) by promoting the reflection and recording of positive events (Bryant, 1989). Positive reflection reduces evening stress and physical and mental complaints, making the "three good things" intervention effective (Bono et al., 2013; for null findings, see Meier et al., 2016). Similarly, mindfulness training, another intervention from the positive psychology literature, has been shown to enhance well-being and reduce mental and physical complaints (Frederickson et al., 2008). This practice can significantly enhance employees' sense of competence and achievement, as mindful individuals tend to adopt a more positive approach toward upcoming work tasks (Rutten et al., 2022). The broad effectiveness of mindfulness training, evidenced by its positive impact on general health (Creswell, 2017), personal resources (Fredrickson et al., 2008) and emotional regulation (Hülsheger et al., 2013), suggests its potential to promote positive and mitigating negative affective work prospection. Notably, mindfulness has been shown to buffer the impact of negative prospective thoughts on psychological distress

(Erguler et al., 2018) and mitigate the effects of workplace demands on detachment and positive affect (Haun et al., 2018), further supporting its integration into workplace wellness strategies. Implementing such initiatives can encourage organizations to cultivate employee well-being through mindfulness and reflection training programs, promoting positive future-oriented thinking and resilience in navigating work challenges.

Secondly, our study supports the implementation of goal-setting workshops with components of positive visualization to benefit employees (Ehrlich, 2012). By teaching them to visualize successful task completion, employees can boost their confidence, and enhance overall engagement and well-being (Ehrlich, 2022; Munezane, 2015). Our findings align with research by Uhlig et al. (2023), which highlights the impact of planning behavior - a self-regulatory strategy encompassing goal setting, planning work steps, and developing alternative plans. Their study revealed that such planning behavior reduces the negative effects of unfinished tasks and weekly rumination while enhancing weekly cognitive flexibility. This connection underscores the value of integrating goal-setting and visualization techniques into organizational training programs, as our study also indicates that positive task-related prospective thoughts can improve sleep quality, recovery, and work engagement.

Finally, to leverage the positive impact of task-related thoughts on employee well-being and engagement, organizations could consider enhancing job resources such as task autonomy or support. Work resources like autonomy also play a crucial role in enhancing well-being (Gonzalez-Mulé et al., 2021). Granting employees greater control over selecting, planning, and executing their tasks has the potential to amplify positive task-related thoughts and its associated benefits. For instance, increasing autonomy during lunch breaks shifted effects from increased fatigue to reduced fatigue (Trougados et al., 2014), demonstrating how autonomy can mitigate workplace

stressors and encourage positive future-oriented thoughts about work tasks. Additionally, perceived organizational support can buffer the relationships between negative work reflection and personal resources (Ott et al., 2019), highlighting the importance of organizational support in fostering a conducive work environment. Moreover, research suggests that a positive collegial climate can mitigate the negative impact of job stressors on work-related thoughts (Pauli & Lang, 2021), emphasizing the significance of social context and resources like a support work environment in promoting positive work-related thoughts. By fostering task autonomy and cultivating supportive organizational climates, companies can promote positive task-related thoughts and thus enhance employee well-being.

From a theoretical standpoint, our study contributes to the Conservation of Resources (COR) Theory (Hobfoll, 1989), which posits that resource loss impacts individuals' well-being more profoundly than resource gain. Our findings suggest that positive prospective thoughts can serve as psychological resources, bolstering employee well-being and engagement. By illustrating how anticipatory cognitive processes regarding future tasks act as personal resources, our study enriches COR theory by highlighting the resource-building potential of positive prospective thinking. Furthermore, our study reflects on how Prospect Theory (Kahneman & Tversky, 1979) pertains to the workplace. The differential impact of positive and negative task-related thoughts on well-being and engagement offers a nuanced perspective with Prospect Theory's principles of anticipated gains and losses. Despite expectations of substantial adverse effects, negative prospective thoughts exerted a less significant impact than anticipated, challenging the prevailing assumption regarding the dominance of negative thoughts on positive thoughts in influencing well-being. By framing future work tasks as gains or losses, our study suggests that employee outcomes

are significantly influenced, potentially reshaping understandings of decision-making processes in work settings.

Moreover, our study emphasizes the importance of integrating temporal dimensions, particularly prospective thinking, into theories of recovery and work engagement. By highlighting the role of future-oriented cognitions as determinants of recovery and engagement, our findings underscore the need to expand existing models of employee engagement and recovery beyond present experiences and retrospective reflections. While current research emphasizes the importance of present experiences that fulfill need expectations in energizing employees thus fostering work engagement (Green et al., 2017), and links work engagement with positive reflections (Sonnentag et al., 2021), integrating prospective thinking into these models can provide a more holistic understanding. Notably, recent studies indicate that changes in employee affect over the workweek are influenced by decreasing work anticipation, emphasizing the role of future-oriented cognitions in shaping well-being (Hülsheger et al., 2022). This suggests that shifts in anticipation may directly influence changes in both positive and negative emotions, further emphasizing the importance of integrating temporal aspects into theories of work engagement and recovery.

In line with these insights, our study investigates the nuanced effects of negative task-related prospective thoughts on sleep quality and fatigue, contributing to the broader understanding of job stress and recovery. By highlighting the cognitive pathways through which work-related stressors impact off-job recovery processes, we underscore the significance of thoughts about future work tasks as a critical mechanism impairing recovery from work. Unlike previous research that often treated work-related thoughts as uniformly negative constructs (e.g., Weiher et al., 2022; Blanco-Ecomienda et al., 2020; Kinnunen et al., 2019), our study distinguishes between the effects

of positive and negative task-related thoughts. This differentiation promotes a more nuanced approach to studying work-related thoughts, acknowledging that not all forms of thinking about work outside office hours detrimentally impact employee well-being. This avenue warrants further exploration, as evidenced by existing studies highlighting the importance of the affective valence of work-related thoughts (e.g., Jimenez et al., 2022; Meier et al., 2016; Cropley & Zijlstra, 2011).

Limitations and Future Research

Our study has limitations and offers various directions for future research in the realm of prospective thoughts. One limitation of our study is the use of a single item for measuring retrospective thoughts, which may not capture the full complexity of this construct. Future research should consider using more comprehensive measures to enhance the validity of findings. Additionally, our study focused solely on well-being and engagement. Future research could explore how the valence and typology of prospective thoughts shape behaviors. For instance, positive work-related reflection has been linked to proactive behaviors, such as innovative work actions (Messman & Mulder, 2017), which contribute to organizational and professional development, as well as job crafting (Messman, 2023). Conversely, negative rumination has been negatively correlated with organizational citizenship behavior (Kuriakose & Bishwas, 2023). While our findings show an impact on well-being and work engagement, future studies should investigate the effect of prospective thoughts on subsequent behaviors.

Furthermore, our study highlights that work centrality does not act as a moderator, pointing to the potential for future research to explore additional boundary conditions that may influence the impact of prospective thoughts on well-being and job attitudes. These boundary conditions could encompass personality traits such as worry and neuroticism (Rutten et al., 2022). For instance, uncertainty might trigger prospective thoughts because people generally fear the

unknown (Carleton, 2016), and work situations inherently involve uncertain future events (Casper & Sonnentag, 2020). This is particularly true for those with high levels of neuroticism or worry, as an unpredictable work environment may exacerbate the detrimental effects of negative prospective thoughts. Moreover, social context, specifically social support, could also moderate the effects of prospective thoughts on well-being and merits further investigation. For example, negative work reflection reduces work engagement through self-efficacy in employees with low perceived organizational support, but not in those with high support (Ott et al., 2019). Additionally, a positive collegial climate can moderate the relationship between job stressors and affective rumination (Pauli & Lang, 2021), indicating that a supportive work environment can reduce rumination. Therefore, further exploration of these potential moderators is warranted to gain a comprehensive understanding of the nuanced dynamics at play.

Finally, a limitation of our study is that we did not inquire about the frequency and context of participants' contact with others in their work environment, which may have influenced our results. Notably, the mean level of positive social thoughts was higher than that for task-related thoughts, indicating substantial social interactions among participants. Despite this, task-related prospective thoughts emerged as significantly more influential than social ones. Understanding the frequency and context of social interactions could provide clarity, as frequent but less impactful social interactions might not strongly influence well-being and engagement. Additionally, high-frequency superficial interactions may differ in impact from less frequent, deeper ones. Therefore, future research should examine the frequency, quality, and context of social interactions to understand better how these factors affect the impact of social and task-related prospective thoughts on well-being and engagement. Such considerations will foster a more nuanced

comprehension of how the distinction between social and task-related prospective thoughts impacts well-being and engagement.

Conclusion

Our study highlights the significant role of prospective thoughts in influencing recovery from work and work engagement. While prior research suggests that work-related cognitions during leisure time (i.e., lack of detachment) impede day-to-day recovery (Sonnentag et al., 2017), our findings provide new insights. With more than 70% of employees reporting frequent thoughts about work issues outside of work hours (Zoupanou et al., 2013), our study underscores the importance of considering the temporal focus, the affective valence, and the content of such thoughts. Our study demonstrates the role of prospection, the ability to mentally simulate the future (Gilbert & Wilson, 2007), in shaping individuals' experiences by showing that positive thoughts lead to favorable outcomes whereas negative thoughts lead to adverse consequences. Furthermore, our findings challenge the conventional belief associating depression with the past, anxiety with the future, and happiness with the present. Instead, our study suggests that the future is not solely a source of anxiety but also holds potential for enjoyment and positively impacts well-being and work engagement. This challenges the temporal boundaries of happiness, implying that positive experiences can be derived from all time dimensions.

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Table 1. *Means, Standard Deviations, ICC, and Correlations of the Measures*

Variables	*M*	*SD-W*	*SD-B*	*ICC*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
Level 1												
1. Sleep	2.74	0.62	0.34	.23	-	-.51*	-.23*	-.18*	.68*	.35*	.18*	-.39*
2. Fatigue morning	1.75	0.58	0.64	.54	-.61*	(.79)	.41*	.34*	-.63*	-.31*	-.18*	-.44
3. Fatigue end-of-work	1.85	0.64	0.63	.50	-.51*	.80*	(.83)	.54*	-.29*	-.14*	-.15*	.11*
4. Fatigue bedtime	1.99	0.64	0.72	.57	-.50*	.85*	.89*	(.83)	-.19*	-.11	-.13*	-.01
5. Recovery	3.01	0.75	0.58	.37	.71*	-.62*	-.47*	-.51*	(.91)	.48*	.19*	.29
6. Work engagement morning	3.03	0.47	0.81	.74	.21*	-.25*	-.19*	-.18*	.47*	(.56)	.23*	-.01
7. Work engagement end-of-work	3.22	0.57	0.75	.63	.16	-.19*	-.18*	-.12	.42*	.91*	(.73)	.10*
8. Prospective positive thoughts	2.93	0.57	0.74	.62	.30*	-.23*	-.25*	-.17*	.47*	.64*	.62*	(.79)
9. Prospective negative thoughts	1.77	0.49	0.59	.52	-.25*	.26*	.35*	.28*	-.30*	.10	.10	-.15
10. Prospective social positive thoughts	2.98	0.68	0.77	.56	.27*	-.22*	-.21*	-.16	.44*	.55*	.51*	.95*
11. Prospective social negative thoughts	1.61	0.59	0.61	.52	-.22*	.26*	.32*	.29*	-.25*	.06	.05	-.16
12. Prospective task positive thoughts	2.87	0.63	0.78	.60	.29*	-.22*	.26*	-.16	.44*	.69*	.66*	.95*
13. Prospective task negative thoughts	1.93	0.62	0.69	.56	-.23*	.21*	.30*	.22*	-.29*	.12	.13	-.12
14. Retrospective thoughts positive	2.74	0.75	0.73	.48	.15	-.03	-.07	.02	.21*	.47*	.43*	.75*
15. Retrospective thoughts negative	1.64	0.61	0.53	.43	-.22*	.20*	.32*	.27*	-.25*	-.07	-.10	-.28*

16. Retrospective thoughts social positive	2.77	0.84	0.76	.45	.14	-.03	-.06	.02	.20*	.40*	.36*	.73*
17. Retrospective thoughts social negative	1.58	0.68	0.54	.38	-.20*	.23*	.35*	.31*	-.24*	-.07	-.08	-.27*
18. Retrospective thoughts task positive	2.71	0.84	0.73	.43	.15	-.03	-.08	.02	.21*	.51*	.48*	.72*
19. Retrospective thoughts task negative	1.68	0.73	0.56	.37	-.22*	.15	.26*	.21*	-.23*	-.06	-.11	-.26*
Level 2												
20. Work Centrality	3.29	-	1.01	-	.01	-.04	-.01	.02	.12	.52*	.46*	.37*

Table 1 (Continued). *Means, Standard Deviations, ICC, and Correlations of the Measures*

Variables	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
Level 1												
1. Sleep	-.11	.30*	.11	.21*	.05	.01	-.05	.02	-.04	.01	-.06	
2. Fatigue morning	.42	.27	-.28	.23	-.23	-.01	-.01	-.01	-.04	-.02	.02	
3. Fatigue end-of-work	.03	.14*	.01	-.29*	.05	-.04	.16*	-.02	.10*	-.04	.17*	
4. Fatigue bedtime	.01	-.21*	.10*	.12*	.09*	-.10*	.12*	-.08*	.08	-.11*	.14*	
5. Recovery	.54*	-.18	-.31*	-.11*	-.36*	.02	-.05	.04	-.01	-.01	-.07*	
6. Work engagement morning	-.07	.10	.13*	.04	-.01	.07	.02	.07	.05	.06	-.01	
7. Work engagement end-of-work	.02	.05	.50	.12*	-.07	.29*	-.08	.25*	-.01	.28*	-.11*	

8. Prospective positive thoughts	-.09	.88*	-.08	.86*	-.07	.39*	-.19*	.33*	-.17*	.37*	-.16*	
9. Prospective negative thoughts	(.71)	-.08	.80*	-.08	.82*	-.11*	.27*	-.08	.23*	-.11*	.24*	
10. Prospective social positive thoughts	-.19*	(.77)	-.08	.53*	-.05	.34*	-.17*	.31*	-.16*	.30*	-.14*	
11. Prospective social negative thoughts	.89*	-.24*	(.81)	-.07	.32*	-.07	.24*	-.06	.24*	-.07	.18*	
12. Prospective task positive thoughts	-.10	.80*	-.08	(.78)	-.07	.33*	-.17*	.26*	-.14*	.34*	-.14*	
13. Prospective task negative thoughts	-.91*	-.11	.63*	-.11	(.72)	-.11*	.20*	-.08	.13*	-.11*	.21*	
14. Retrospective thoughts positive	.04	.71*	.02	.71*	.04	(.77)	-.02	.90*	-.01	.90*	-.02	
15. Retrospective thoughts negative	.64*	-.31*	.08*	-.21*	.48*	-.06	(.66)	.01	.85*	-.04	.87*	
16. Retrospective thoughts social positive	.01	.74*	.00	.64*	.02	.97*	-.05	-	-.01	.62*	.03	
17. Retrospective thoughts social negative	.61*	-.32*	.68*	-.20*	.43*	-.08	.95*	-.07	-	-.01	.49*	
18. Retrospective thoughts task positive	.06	.64*	.05	.73*	.05	.96*	-.07	.86*	-.08	-	-.07	
19. Retrospective thoughts task negative	.60*	-.29*	.62*	-.20*	0.48*	-.04	.95*	-.03	.81*	-.06	-	
Level 2												
20. Work Centrality	.17	.32*	.09	.38*	.22*	.39*	-.05	.33*	-.05	.42*	-.05	(.86)

Note. *SD-W* = standard deviation within-person, *SD-B* = standard deviations between-person. *SD* and *ICC* are based on variance estimates of unconditional (null) models. Correlations above the diagonal reflect the within-person associations of the constructs. Correlations below the diagonal reflect the between-person associations of the

aggregated measures. Numbers in the diagonal reflect the Cronbach's Alpha. For Level 1 variables, Cronbach's Alpha was calculated with the R shiny web applications: https://psychmethods.shinyapps.io/withinpersonresearch/, developed by Yang et al. (2022).
N: Level 1 = 1035; Level 2 = 127.
* $p < .05$. Two-tailed tests

Table 2. *Unstandardized Coefficient Estimates for the Multilevel Analysis of Positive and Negative Prospective thoughts on Sleep Quality, Fatigue, Recovery and Work Engagement.*

	Sleep		Fatigue Morning		Fatigue Bedtime		Recovery		Work engagement	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	2.72*	68.43	1.75*	26.35	1.98*	29.05	2.94*	50.17	2.94*	44.02
Level 1										
Positive prospective thoughts	0.10†	1.94	-0.10*	-2.26	-0.06†	-1.70	0.19*	3.04	0.12*	2.59
Negative prospective thoughts	-0.08	-1.42	0.10*	2.01	0.12*	2.68	-0.12	-1.68	-0.01	-0.25
Retrospective thoughts positive	0.02	0.43	0.06†	1.79	-0.04	-1.51	0.01	0.19	0.03	0.81
Retrospective thoughts negative	-0.01	-0.08	-0.06	-1.05	0.02	0.53	-0.02	-0.47	-0.02	-0.51
DV at earlier measurement occasion	-0.03	-0.76	0.05	1.30	0.48*	16.46	-0.05	-1.15	0.03	0.76
Level 2										
Work Centrality	-0.01	-0.05	-0.02	-0.34	0.02	0.34	0.08	1.44	0.45*	6.81
Positive prospective thoughts x Work centrality	-0.01	-0.12	0.01	0.08	0.01	0.21	-0.02	-0.34	-0.04	-0.83
Negative prospective thoughts x Work centrality	0.10†	1.79	-0.08	-1.49	-0.07	-1.47	0.03	0.41	-0.03	-0.65

*Note: *p < .05, †p <.10, control variables are the last measurement occasion respectively for each outcome.* DV at earlier measurement = controlled for the previous measurement outcome (for work engagement and fatigue, the end of work measure; and for recovery and sleep quality, the morning measure) occasion

Table 3. *Unstandardized Coefficient Estimates for the Multilevel Analysis of Positive, Negative, Social, and Task Prospective Thoughts on Sleep Quality, Fatigue, Recovery and Work Engagement.*

	Sleep		Fatigue Morning		Fatigue Bedtime		Recovery		Work engagement	
	B	*T*	*B*	*T*	*B*	*T*	*B*	*T*	*B*	*T*
Intercept	2.72*	69.30	1.74*	26.60	1.98*	29.08	2.94*	50.27	2.95*	43.91
Level 1										
Positive social prospective thoughts	-0.04	-0.73	0.04	0.82	-0.04	-1.08	-0.03	-0.57	0.03	0.64
Negative social prospective thoughts	0.03	0.63	0.02	0.33	0.05	1.31	-0.01	-0.19	-0.05	-1.19
Positive task prospective thoughts	0.14*	2.82	-0.13*	-2.83	-0.03	-0.73	0.22*	3.66	0.09*	2.07
Negative task prospective thoughts	-0.10*	-2.17	0.07†	1.67	0.06†	1.73	-0.10†	-1.77	0.04	0.87
Retrospective thoughts social positive	0.01	0.18	-0.01	-0.12	0.01	0.11	0.02	0.42	-0.02	-0.64
Retrospective thoughts social negative	0.03	0.81	-0.05	-1.40	-0.01	-0.15	0.04	0.75	0.04	1.10
Retrospective thoughts task positive	0.01	0.14	0.04	1.42	-0.04	-1.55	-0.01	-0.21	0.05	1.49
Retrospective thoughts task negative	-0.04	-1.00	0.02	0.73	0.02	0.74	-0.07	1.48	-0.05	-1.49
DV at earlier measurement occasion	-0.04	-1.04	0.04	1.03	0.48*	16.26	-0.06	-1.58	0.02	0.53
Level 2										
Work Centrality	-0.01	-0.17	-0.02	-0.28	0.02	0.36	0.08	1.37	0.45*	6.77

Positive social prospective thoughts x Work centrality	0.02	0.41	0.05	0.99	0.02	0.51	0.01	0.22	0.03	0.67
Negative social prospective thoughts x Work centrality	0.04	0.74	0.01	0.24	-0.07	-1.40	0.01	0.11	0.01	0.01
Positive task prospective thoughts x Work centrality	-0.04	-0.80	-0.03	-0.58	-0.01	-0.34	-0.05	-0.80	-0.07	-1.55
Negative task prospective thoughts x Work centrality	0.07	1.44	-0.08	-1.69	-0.01	-0.38	0.02	0.30	-0.04	-0.90

*Note: *p < .05, †p <.10, control variables are the last measurement occasion respectively for each outcome.* DV at earlier measurement = controlled for the previous measurement outcome (for work engagement and fatigue, the end of work measure; and for recovery and sleep quality, the morning measure) occasion

General Discussion

Guided by positive psychology, my thesis argues that empathy, observing prosocial behaviors, and prospective thoughts are essential for improving well-being and building a supportive work environment. A key part of this dissertation is its comprehensive examination of workplace well-being across four levels of antecedents: cognitive, affective, behavioral, and social.

At the cognitive level, we delve into the role of prospective thoughts. Our findings reveal that positive prospective thoughts significantly enhance well-being by reducing morning fatigue, improving recovery, and increasing work engagement, even above the effect of retrospective thoughts. Additionally, our research highlights that task-related prospective thoughts have a more substantial impact than social-related prospective thoughts. This emphasizes the critical role of the valence and type of prospective thoughts in influencing well-being, underscoring the cognitive antecedents of positive prospective thoughts on employee well-being.

On the affective level, we explore well-being through the observation of prosocial behaviors and found that these behaviors are associated with increased positive affect and decreased negative affect. Observing such behaviors improves mood, even when individuals are not directly engaging in or receiving these actions. These findings highlight the profound positive impact that merely witnessing prosocial actions can have on an individual's affective state. Therefore, the affective dimensions of well-being are deeply influenced by the simple act of observing prosocial behaviors.

At the behavioral level, we examine empathy by differentiating between its two components: affective and cognitive empathy. Our findings indicate that trait affective empathy is linked to fatigue, whereas trait cognitive empathy is associated with providing support, emphasizing the behavioral dimension of well-being. Additionally, the effects of state empathy

show beneficial impacts, particularly state cognitive empathy, which is associated with increased social support and reduced emotional exhaustion. Overall, our research reveals that empathy is crucial for the behavioral dimension of well-being, highlighting its significant role in the workplace.

Finally, on the social level, all three papers emphasize the crucial role of social relationships and social resources in promoting well-being, as they serve as a fundamental mechanism for enhancing well-being and job attitudes (Varma et al., 2023). Empathy, particularly cognitive empathy, is highlighted for its role in fostering deeper connections and predicting social support. Observing prosocial behaviors is shown to enhance well-being by increasing positive affect. Additionally, the significance of social prospective thoughts is considered. This thesis underscores the importance of social relationships for well-being in the workplace.

Theoretical and Practical Implications

The aim of this dissertation is to understand and promote well-being in the workplace through positive psychology, integrating empathy, prosocial behaviors, and prospective thoughts. Positive psychology aims to foster workplace well-being by focusing on positive attributes and experiences (Donaldson & Ko, 2010), as highlighted in this thesis through Fredrickson's broaden-and-build theory (2001), Psychological Capital (Luthans et al., 2007), character strengths and positive relationships.

Building on these frameworks, one of the critical insights from this thesis is that affective empathy in the workplace is associated with increased fatigue, while cognitive empathy enhances support among colleagues, emphasizing the need to buffer the negative emotions elicited by affective empathy. To address this, enhancing positive emotions is a promising strategy, as positive affect helps individuals cope with the emotional exhaustion that often accompanies empathetic experiences (Lin et al., 2022). Engaging in present-focused

attention while providing support to others has been shown to predict positive emotions and prevent negative emotions simultaneously (Cameron & Fredrickson, 2015). Additionally, the broaden-and-build theory suggests that positive emotions foster psychological resilience (Tugade & Fredrickson, 2004) and can counteract negative emotions (Fredrickson et al., 2000). Therefore, promoting positive emotions in the workplace could counteract the negative effects of affective empathy and bolster the benefits of cognitive empathy.

Building on this idea, understanding the connection between Psychological Capital, character strengths, and empathy further helps mitigate the negative effects of affective empathy and enhance the benefits of cognitive empathy. Training programs that focus on enhancing Psychological Capital can develop resilience and self-efficacy, helping employees manage empathy effectively and engage in prosocial behaviors (Luthans et al., 2007; Youssef-Morgan & Luthans, 2015). Since self-efficacy can be trained through observation (Luthans et al., 2010), managers could model it by demonstrating active listening skills and appropriate emotional responses during team meetings, helping employees manage empathy more effectively. Moreover, integrating character strengths such as kindness, teamwork, and fairness into the workplace is essential for promoting a positive dynamic that emphasizes empathy and prosocial behaviors (Westman et al., 2013; Miglianico et al., 2020). For example, a student in my class with a core strength of fairness initiated a program with management's support, dedicating two hours per week for colleagues to discuss their concerns and workplace issues with him, serving as the team's spokesperson. Such initiatives can foster an environment where employees feel valued and supported, leading to enhanced interpersonal relationships and overall workplace well-being.

To create an environment where employees feel valued and supported, prosocial behaviors are essential in shaping a positive organizational culture. Our findings demonstrate that observing prosocial behaviors in occupational settings enhances emotional states and may

corroborate the broaden-and-build theory by fostering the long-term development of social resources (Fredrickson, 2001). Indeed, witnessing these behaviors amplifies the inclination toward similar actions, creating a cycle of kindness and support within the workplace, aligning with the upward spiral of the broaden-and-build theory (Fredrickson & Joiner, 2000; Snippe et al., 2018). To build a more altruistic culture, organizations could implement recognition programs to highlight prosocial behaviors, thereby reinforcing positive actions and fostering a supportive work environment. By acknowledging and celebrating acts of kindness and cooperation, organizations can create a culture that values and encourages prosocial behavior. Additionally, organizations can create opportunities for employees to engage in and observe prosocial activities, such as volunteer programs or peer support groups. These initiatives promote positive interactions and help develop strong interpersonal relationships among employees, enhancing overall well-being.

Positive interactions are the foundation of positive relationships at work, which are crucial for achieving and sustaining workplace success. Our research found that prosocial behaviors enhance well-being, while cognitive empathy fosters support, creating a reinforcing cycle of positive relationships within the organization (Morelli et al., 2014). These strengthened relationships provide emotional and psychological support among employees, promoting a cycle of positive affect and mutual support. To enhance positive relationships and build a supportive environment, organizations should focus on fostering empathy and encouraging prosocial behaviors. Practical implementations include regular team-building activities, ‘’lunch and learn’’ sessions, where employees can engage in informal training or discussions during lunch breaks, and structured social interactions, such as social gatherings and peer mentoring programs, to strengthen positive relationships and build a positive environment.

Building on the fundamental role of a positive environment, this thesis underscores the importance of positive prospective thoughts in improving workplace well-being. Contrary to

conventional beliefs about the dominant impact of negative experiences (Baumeister et al., 2001), our results showed that individuals benefit more from positive prospective thoughts, aligning with the broaden-and-build theory (Fredrickson, 2001). By promoting positive prospective thoughts through training programs focused on positive thinking, and by providing regular feedback and recognition for progress, organizations can reinforce a positive mindset, ensuring that employees remain motivated and focused on their future successes. To further foster a positive mindset, the interplay between Psychological Capital and prospective thoughts enhances workplace well-being, particularly by deepening hope and optimism (Watkins, 2008; Eichberger et al., 2021). Hope can be cultivated by designing clear and achievable pathways for employees, while optimism can be developed by encouraging reflection on positive outcomes and celebrating small achievements (Luthans et al., 2010). Consequently, by fostering positive prospective thoughts and creating a supportive environment, organizations can improve overall well-being.

Limitations and Avenues for Future Research

This thesis has limitations and offers various directions for future research. A significant limitation of the three studies is their inability to establish causality. Diary studies, even with daily measures, offer valuable insights into temporal patterns and relationships but cannot definitively determine causality. To address this, future research should employ experimental designs, such as vignette studies, which are more suited for testing causal relationships (Finkel, 1995). For instance, Cameron et al. (2019) created the Empathy Selection Task to measure the desire to empathize, where participants choose between situations that require empathy or an alternative action. Similarly, vignettes can be designed to trigger either state affective empathy (feeling the same emotional state as the other person) or state cognitive empathy (understanding the other person's emotional state). For example, participants might read a story about a person who lost their job; in the affective empathy condition, the story conveys strong sadness, while

in the cognitive empathy condition, it explains the person's situation and thoughts. Afterward, participants would report their feelings (emotional reactions) and potential actions to help the person (behavioral reactions). Employing such methodologies would allow for more definitive conclusions about the effects of empathy, prosocial behaviors, and prospective thoughts on workplace well-being.

Another limitation is that all three studies rely on self-reported measures. Self-reports were selected as they are deemed appropriate and relevant for this dissertation, which focuses on employees' perceptions of their experiences, well-being, and work-related aspects. However, self-report measures introduce the risk of common-method bias, which occurs when the data collection method (such as self-report surveys) causes relationships between variables to be exaggerated, minimized, or misrepresented, thereby affecting the validity and reliability of the study findings (Podsakoff et al., 2024). To mitigate these negative effects, we attempted to temporally separate the measurement occasions of predictors and outcomes in Study 3. However, the overlap in data collection times could still influence the results in Studies 1 and 2. Future research could benefit from distinct temporal separations; for example, in Study 2, surveying observed prosocial behaviors at the end of the workday and well-being at bedtime. Additionally, future studies should consider obtaining outcome measures from various sources (Podsakoff et al., 2024), such as coworker or supervisor ratings, to further reduce the potential for common-method bias.

A further limitation present in all three papers is the exploration of relatively new research subjects. While this approach offers significant benefits by filling a gap in the literature, it also posed challenges due to the lack of extensive literature and consensus on measures or definitions. This uncertainty impacted the design of all three studies, leading to potential variability in how constructs were operationalized and measured. This lack of established research required us to develop study designs and methodologies, which may

introduce inconsistencies. Additionally, the lack of abundant empirical findings meant that our interpretations and applications of our concepts might differ from those used in future research. Therefore, the novelty of the research subjects in these studies began to fill gaps in the existing literature but also introduced variability and potential inconsistencies that may evolve as the field matures, paving the way for future research to build on these foundations.

Building on this groundwork, while the diverse range of occupations in our sample is a strength, future research could benefit from focusing on specific job types to investigate whether the nature of the job impacts the findings. We focused on social aspects across all three studies, but the nature of these social interactions could differ significantly depending on the job. For instance, highly social jobs with asymmetrical relationships, such as being a social assistant, teacher, or psychotherapist, might yield different results compared to jobs with minimal interactions or egalitarian relationships. Exploring these variations could provide valuable insights into how the asymmetry, frequency, and intensity of interactions influence employee behavior and well-being, potentially revealing specific patterns unique to different occupational environments. Future research could delve into these differences, particularly focusing on empathy and prosocial behaviors. It would be fascinating to see if the effects we found are context-dependent and whether the type of job and domain impact the influence of empathy and observing prosocial behaviors.

Conclusion

Guided by positive psychology, my thesis reveals that empathy, prosocial actions, and positive prospective thoughts are essential for workplace well-being. However, it is crucial to acknowledge the complexities and nuances within the positive psychology framework in promoting workplace well-being. Focusing on the positive side has many benefits, but it should all be in moderation, because too much of a good thing can also be detrimental and hinder well-

being (Warr, 1987). Acknowledging negative aspects and recognizing exhaustion, sadness, or doubt are as important as celebrating the positive aspects of one's life.

Positive prospective thoughts significantly impact well-being and engagement, yet an overemphasis on positivity can sometimes overshadow necessary critical thinking and potential challenges. Therefore, a nuanced approach is necessary to balance optimism with realistic appraisals. This balance allows for clear understanding and accountability, ensuring that positive thinking does not compromise judgment. While optimism empowers individuals to reach their objectives, its advantages are not limitless (Peterson, 2000). Pessimism also has its place, both in society and in our personal lives, and we should acknowledge its value when its perspective is useful.

Similarly, while the affective benefits of observing prosocial behaviors on well-being are clear, the expectation to constantly witness or engage in these actions can lead to detrimental consequences. Therefore, the organizational context plays a crucial role in maintaining the positive nature of these behaviors and preventing them from becoming sources of strain. Furthermore, while cognitive empathy enhances support, affective empathy can lead to fatigue, underscoring the need for a balanced approach to fostering empathy in the workplace. This balance is essential to preserve employee well-being while effectively supporting coworkers without becoming overwhelmed by empathic demands.

In the same vein, social relationships and social support are crucial for well-being in the workplace, yet maintaining balance is key. Overly strong social relationships can blur emotional boundaries and confuse professional roles, potentially harming both well-being and job attitudes. When emotional boundaries are crossed, it can lead to detrimental consequences such as conflict or exhaustion, as employees may struggle to separate their personal feelings from professional responsibilities. Additionally, blurred professional roles due to overly strong social ties can create frustration and tension, which can in turn hamper cooperation,

productivity, and diminish overall well-being. This thesis underscores the importance of recognizing both the benefits and potential drawbacks of positive psychology constructs, emphasizing the need for balanced consideration in organizational policies. Organizations must thus be vigilant in creating structures that support healthy practices without imposing a toxic positivity culture on employees.

Ultimately, this research advocates for a more balanced and critical approach to positive psychology in the workplace. By acknowledging and addressing both the benefits and challenges, we can create work environments that enhance well-being and productivity, fostering conditions where employees not only survive but thrive. Recognizing the impact of positive psychology, we see its crucial role in fostering individual and collective well-being at work. By leveraging its principles and emphasizing the positive aspects of human interaction and psychological strengths, we can inspire a more engaged, motivated, and resilient workforce. In our quest to build healthier workplaces, we must remember that genuine well-being comes from embracing the complex realities of both positive and negative human experiences. As Snoop Dogg wisely said, “There’ll be ups and downs, smiles and frowns” and it is in this balance that we pave the way for a brighter, more fulfilling work environment for all.

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