

**Four essays on the role of emotion regulation strategies and the impact of emotion
regulation ability in different organizational contexts**

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List of abbreviations

AI	Artificial intelligence
ANOVA	Analysis of variance
AOM	Academy of Management
b	Unstandardized regression coefficient
β	Standardized regression coefficient
CEO	Chief executive officer
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CI	Confidence interval
COR	Conservation of resources
e.g.	Exempli gratia (English: for example)
EURAM	European Academy of Management
df	Degrees of freedom
F	F-test
ICC	Intraclass correlation coefficient
i.e.	Id est (English: that is)
M	Mean
MBA	Master of Business Administration
n	Sample size
p	Probability level
RA	Research avenue
RMSEA	Root mean square error of approximation
SD	Standard deviation
SE	Standard error
SEM	Structural equation modeling
t1	Measurement time 1
t2	Measurement time 2
VHB	Verband der Hochschullehrerinnen und Hochschullehrer für Betriebswirtschaft e.V.
χ^2	Chi-squared test

1. Introduction

1.1 Relevance and overview of the dissertation

Employees are guided by their emotions (Weiss & Cropanzano, 1996) and how they regulate them (Grandey, 2000). Even if this may sound like a platitude, the topic of emotions has long led a niche existence in management research (Ashkanasy & Dorris, 2017), which traditionally emphasized rationality over emotions (Ashforth & Humphrey, 1995; Grandey, 2000). Nowadays, emotions are acknowledged as a vital component for processes and behaviors in the workplace (Ashkanasy & Dorris, 2017; Elfenbein, 2023). However, management scholars often neglect the adjustable nature of emotions (Gagnon & Monties, 2023)—instead of passively enduring unwelcome emotions, individuals can actively regulate their own and others' emotions, which is called *emotion regulation* (Diefendorff et al., 2008; Grandey, 2000; Gross, 1998; Mauss et al., 2007).

The concept of emotion regulation has been predominantly studied in the context of service work so far, focusing on frontline workers and the paradigm of “service with a smile” (Grandey et al., 2005, p. 38) amid negative experiences of employees with customers (Gabriel et al., 2023; Grandey & Gabriel, 2015; Grandey & Melloy, 2017). Existing studies in the service context have depicted a rather bleak picture of emotion regulation (Lennard et al., 2019), which has been shown to potentially lead to decreased well-being, performance behaviors, job satisfaction, damaged relationships, and ultimately to burnout risks due to the continual effort of showing emotions that are not felt (Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2013; Mesmer-Magnus et al., 2012).

In non-service organizational contexts, which encompass the experiences of employees and leaders and their interactions, the study of emotion regulation is considerably less developed (Bindl et al., 2022; Lennard et al., 2019; Ozcelik, 2013). This is surprising, considering that the continuous regulation of emotions is pertinent to non-service employees

and leaders alike, with the potential negative impacts of emotion regulation on well-being and performance as critical factors for firm success (Bindl et al., 2022; Grandey & Melloy, 2017; Lennard et al., 2019; Ozcelik, 2013). Given the increasing importance of emotional well-being in the workplace, and the need to stay competitive with committed and performing employees (Blustein et al., 2023; Gabriel et al., 2023; Jarden et al., 2023; McKinsey & Company 2023a), it is both theoretically and practically imperative to examine effective emotion regulation of employees and leaders in non-service contexts.

The topic of emotion regulation has particular importance in high-stress and competitive work environments (Burch et al., 2013), which is why this dissertation extends the investigation of emotion regulation to the specific contexts of entrepreneurial, young, and small firms. These contexts are typically characterized by heightened emotional experiences, stress, and limited resources (Andersén, 2017; Burch et al., 2013; Schindehutte et al., 2006). In such environments, emotion regulation can be a critical precursor to emotional well-being, commitment, creativity, and performance of each employee, which in turn has significant importance for the overall performance and innovation of the firm (Burch et al., 2013; Ingram et al., 2019; Lua et al., 2023). This dissertation builds on existing literature by examining the antecedents and consequences of emotion regulation, as well as the role of emotion regulation ability in specific contexts. It offers new insights into how emotion regulation emerges and identifies the circumstances under which its consequences can be beneficial or detrimental to employees' well-being, engagement, creativity, and performance. This leads to the overarching research question of this dissertation: ***What are the antecedents and consequences of emotion regulation strategies in entrepreneurial, young, and small firms, and how does emotion regulation ability contribute to this?***

Emotion regulation scholars predominantly concentrate on two main emotion regulation strategies in the work context, namely surface acting and deep acting (Brotheridge

& Lee, 2003; Grandey, 2000; Hochschild, 1983). The use of these strategies at work has been termed *emotional labor*, which refers to emotion regulation as part of the job (Grandey, 2000). This particular definition is unique in its focus on the expression of emotions with an interpersonal objective in the work context (Grandey & Melloy, 2017). This differentiates it from other concepts in the psychology and organizational literature surrounding emotion regulation or coping strategies (e.g., emotion-focused coping as a response to stress) (Lazarus & Folkman, 1984) which do not necessarily include this interpersonal component, but focus on the internal processes that individuals undergo when regulating emotions (Grandey & Melloy, 2017; Gross, 2015). Surface acting and deep acting, in contrast, are commonly employed in front of others and in response to display rules, which describe an employee's perception of what kind of emotional display would be appropriate in a given interpersonal context (Ekman & Friesen, 1969; Grandey, 2000; Hochschild, 1983; Rafaeli & Sutton, 1989).

Surface acting involves altering one's external expression without changing the already developed underlying feelings, hence, masking oneself to display emotions that are not genuinely felt (Hülshager & Schewe, 2011). Deep acting goes beyond the mere outward display and involves actively trying to align one's internal feelings with the emotions that need to be expressed, hence, deep acting happens before an emotion has fully developed (Grandey, 2003; Hochschild, 1983). A third, and so far only rarely researched strategy, is the display of genuine emotions (e.g., Batchelor et al., 2018; Diefendorff et al., 2005; Hülshager et al., 2015), which can encompass both positive and negative emotions, and involves no active regulation (Ashforth & Humphrey, 1993).

Although emotion regulation strategies inherently contain an interpersonal objective (Grandey & Melloy, 2017), they have so far been predominantly researched from an intrapersonal perspective (Groth et al., 2023; Troth et al., 2018). Extant research shows that especially employees' surface acting is emotionally draining (Humphrey et al., 2015; Sayre et

al., 2021), because it requires constant control over one's expressions, leading to a clash between felt and expressed emotions, which increases stress and job dissatisfaction because employees do not feel aligned with their true selves (Mesmer-Magnus et al., 2012). A smaller number of studies has also looked at emotion regulation from an interpersonal perspective, showing that surface acting is perceived as inauthentic for observers (Gabriel et al., 2015; Hennig-Thurau et al., 2006) and can lead to impaired relationships (Fisk & Friesen, 2012).

In contrast, extant research generally considers deep acting and the display of genuine emotions as less harmful than surface acting, because it reduces, in the case of deep acting, or resolves, in the case of genuine emotions, the dissonance between felt and expressed emotions (Batchelor et al., 2018; Humphrey et al., 2015). This potentially improves job satisfaction (Grandey & Melloy, 2017; Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2013) and observers' reactions (Batchelor et al., 2018). However, studies provided mixed results so far, leaving the role of deep acting and the display of genuine emotions still unclear (Gabriel et al., 2023; Hülshager & Schewe, 2011). Addressing this research gap is vital, as it is imperative for employees and leaders to understand alternatives to surface acting—a quick to use (Moin et al., 2020), yet potentially harmful strategy (Gabriel et al., 2023; Grandey & Gabriel, 2015; Grandey & Melloy, 2017). The literature needs further investigation to determine whether these alternatives might involve deep acting or the expression of genuine emotions, a question that this dissertation will address.

Organizational scholars also approach emotion regulation from an ability perspective, which has gained popularity as a subdimension of “emotional intelligence” (Salovey & Mayer, 1990). Emotion regulation ability reflects the individual capacity of individuals to manage and control their emotional responses (Grandey & Gabriel, 2015; Scherer et al., 2020) by regulating their own and others' emotions, using their knowledge about the impact of emotional expressions (Salovey & Mayer, 1990). Emotion regulation ability can potentially

influence the choice and the effectiveness of emotion regulation strategies, which has surprisingly only been selectively explored so far (Gabriel et al., 2023; Grandey, 2000; Joseph & Newman, 2010; Scherer et al., 2020). However, it is important to clarify this link, to provide guidance on interventions and trainings for employees to improve their emotion regulation abilities, which potentially lead to the use of effective emotion regulation strategies (Gabriel et al., 2023; Grandey & Melloy, 2017; Mesmer-Magnus et al., 2012).

This dissertation concentrates on emotion regulation in non-service organizational contexts through four unique essays, specifically targeting the contexts of entrepreneurial, young, and small firms. The importance of examining emotion regulation in those contexts stems from their unique challenges and dynamics, which unveils novel perspectives on emotion regulation at work (Boyd et al., 2015; Frese & Gielnik, 2023), in contrast to the more stable environments of typical service roles centered on customer interactions (Burch et al., 2013). In particular, these work contexts introduce unique stressors and uncertainties, such as threats like financial issues and business failure, which can provoke negative emotions like anxiety, anger, or stress (Anwar et al., 2023; De Cock et al., 2020; McKinsey & Company 2020).

Concurrently, these organizational contexts impose specific demands on the behavior of employees and leaders. Entrepreneurial, young, and small firms share commonalities in several areas, particularly in operating under resource constraints, relying on creativity and innovation, and maintaining close work relationships (Laguna et al., 2021; Sahut & Peris-Ortiz, 2014; Zaech & Baldegger, 2017). However, these contexts also exhibit notable differences: While small firms can be at any stage of development and may not necessarily pursue rapid growth, entrepreneurial and young firms are typically in the early stages of their lifecycle, thereby being subject to volatilities and challenges (Begley, 1995). As effective emotion regulation is a precursor for attitudes and behaviors, both emotion regulation ability

and the use of effective emotion regulation strategies of founders and employees are vital in these contexts, especially during uncertain times (Batchelor et al., 2018; Burch et al., 2013; Madera & Smith, 2009; Wu et al., 2021). The question of how entrepreneurs can navigate the prevailing uncertainty and challenges with the help of emotion regulation will be addressed in the first essay of this dissertation with a systematic integrative review that gives an overview of the current state of the literature of entrepreneurial emotion management.

The prevailing uncertainty does not only affect leaders in their roles as founders, but also their employees, as work relationships between leaders and employees as well as coworkers in those firm contexts are typically close (Zaech & Baldegger, 2017). This makes an interpersonal perspective important (Batchelor et al., 2018; Gabriel et al., 2020; Humphrey, 2012; Lennard et al., 2019): Both leaders and employees must work collaboratively, which underscores the importance to examine effective interpersonal emotion regulation strategies by leaders to maintain employee well-being, commitment, and engagement (Gabriel et al., 2023; Gagnon & Monties, 2023; Troth et al., 2018), which is especially relevant—but not limited—to uncertain times (Madera & Smith, 2009; Wu et al., 2021). Although leaders in young firms are often described as particularly optimistic and passionate (Hmielecki & Baron, 2009), they also experience fear when encountering business challenges (Dasborough & Scandura, 2021). This could be the case, for instance, when young firms find themselves in a crisis situation leading to severe financial difficulties. An example is the COVID-19 pandemic, which put many firms in precarious positions (Kuckertz et al., 2020; Shepherd, 2020).

The question arises as to whether leaders, in such situations, should engage in emotion regulation in front of their employees or display their genuine emotions, such as fear. The use of emotion regulation strategies by leaders might be perceived as inauthentic, potentially leading to negative reactions from employees (Fisk & Friesen, 2012; Moin, 2018; Wang &

Seibert, 2015). On the other hand, expressing genuine fear could initiate a negative spiral among employees, adversely affecting their engagement and commitment (Barsade, 2002; Humphrey, 2012). This dissertation will explore this critical choice in the second essay, emphasizing the importance for leaders to maintain high levels of employee commitment and engagement in crisis situations to ensure organizational success.

Additionally, this dissertation distinguishes itself by addressing the need to focus on a more diversified and positive view on emotion regulation in non-service contexts, as past research in the service context has predominantly focused on negative events and the harmful side of emotion regulation (Gabriel et al., 2023; Lennard et al., 2019; Troth et al., 2018). However, emotion regulation strategies also hold potential for *improving* employees' behaviors at work (Lennard et al., 2019). For instance, daily creativity as a key behavior in small firms plays a pivotal role in maintaining an organization's capacity for innovation, which is more paramount than ever in fast-changing economies, and which is especially critical in the dynamic contexts of entrepreneurial and small firms (Atkinson, 2007; de Jong & Den Hartog, 2007; Laguna et al., 2021). Existing resources in such firms are usually limited, making each employee's behavior relevant for firm success (Greene et al., 1997). The third essay addresses the question of which emotion regulation strategy—deep acting or surface acting—is more conducive to employee creativity and performance (Grandey & Melloy, 2017; Parke et al., 2015). This, in turn, could potentially impact the overall performance of a small firm (Anderson et al., 2014; Lua et al., 2023; Sonnentag et al., 2023).

Lastly, this dissertation examines which antecedents may positively impact emotion regulation ability and the choice of emotion regulation strategies. For instance, employees' sleep quality is generally seen as a vital influencing factor for employees' overall well-being and health in organizational literature (Barnes, 2012; Barnes & Watson, 2019; Williamson et al., 2019). With regard to emotion regulation, research has only studied the reverse link so

far—the impact of emotion regulation on sleep (Fouquereau et al., 2019; Gu et al., 2020; Wagner et al., 2014; Yeh et al., 2020). However, sleep quality may also be an impacting factor for emotion regulation at work through its role in cognitive functioning for individuals, which is needed for effective emotion regulation (Barnes, 2012). As effective emotion regulation is crucial for employees' well-being, performance, and functioning relationships at work, potentially influencing overall firm performance (Côté, van Kleef, et al., 2013; Gabriel et al., 2023; Grandey & Melloy, 2017), this is an important research void. Hence, this dissertation sheds light on the relationship between daily sleep quality and emotion regulation ability and the use of emotion regulation strategies in the fourth essay.

In summary, this dissertation extends the study of emotion regulation beyond traditional service contexts to focus on its relevance within entrepreneurial, young, and small firms. This contextual shift aims to address the central research question of the antecedents and consequences of emotion regulation strategies in such firms and the role of emotion regulation ability. This dissertation investigates the overarching research question through four distinct essays, each addressing specific sub-questions related to the overarching question. **Table 1-1** provides a summary of these essays, outlining their theoretical perspectives, methodologies, objectives, and contributions, as well as their current statuses.

The structure of this dissertation is as follows: The subsequent sections of **Chapter 1** go into detail about the sub-questions tackled by the four essays, and explain how the essays are thematically and contextually linked. Additionally, it highlights the overall contributions made by this dissertation. **Chapters 2 to 5** present the four essays that comprise this dissertation. **Chapter 6** concludes the dissertation by discussing the theoretical and practical insights gained from the essays, their implications, and suggesting directions for future research.

Table 1-1 Characteristics of the four essays

Essay	Title	Theoretical perspective(s)	Research objectives	Method and sample	Results and contributions	Current status	Conferences	Share of contributions
I	Integrating emotion regulation, emotional intelligence, and emotion-focused coping in the entrepreneurial context: A review and research agenda	<ul style="list-style-type: none"> - Emotion regulation - Emotional intelligence - Emotion-focused coping 	<ul style="list-style-type: none"> - The study of how entrepreneurs regulate emotions is still a developing field, marked by various research streams (emotion regulation, emotional intelligence, and emotion-focused coping) that simultaneously explore similar phenomena. - By employing the umbrella term of entrepreneurial emotion management, this essay aims to provide a summary and categorize the central themes found within the existing body of literature. 	Systematic integrative review of 54 studies	<ul style="list-style-type: none"> - The review highlights central themes used in the literature with a framework, noting both shared aspects and distinctions among the research streams. This includes viewing entrepreneurial emotion management either as an ability or as the use of emotion regulation strategies as a trait or in specific situations, along with contextual factors affecting entrepreneurial emotion management. - Future research avenues are identified. 	Accepted in <i>International Small Business Journal (ISBJ)</i> (in press)	Presented at - 19th <i>Interdisciplinary European Conference on Entrepreneurship Research (IECER)</i> , virtual, 2021. - 22nd <i>European Academy of Management Conference (EURAM)</i> , Winterthur, Switzerland, 2022. - 82nd <i>Annual Meeting of the Academy of Management (AOM)</i> , Seattle, USA, 2022.	L. Schmodde 85% M. C. Wehner 15%
II	Employee reactions to leader emotional display strategies in a crisis situation	<ul style="list-style-type: none"> - Emotions as social information (EASI) model 	<ul style="list-style-type: none"> - Addressing the stressors and uncertainties in young firms, this study aims to investigate a leader's behavior during a crisis situation, specifically a young firm's financial difficulties due to the COVID-19 pandemic. - In a crisis, leaders must choose whether to show or regulate their fear, hence, employee reactions to a leader's deep acting, surface acting, and genuine emotions (i.e., fear) are investigated. 	Quantitative vignette study with a sample of 159 employees	<ul style="list-style-type: none"> - Surface acting heightened negative emotions like hostility, while deep acting lessened fear. Furthermore, surface acting negatively affected job engagement and commitment, while deep acting revealed no differences to showing genuine emotions. - Findings suggest leaders should consider displaying their genuine fear during a crisis rather than employing potentially inauthentic emotion regulation strategies. 	Published in <i>European Management Review (EMR)</i>	Presented at - 21st <i>European Academy of Management Conference (EURAM)</i> , virtual, 2021 (Nominated for best paper in the Strategic Interest Group Organizational Behavior Leadership Track). - 81st <i>Annual Meeting of the Academy of Management (AOM)</i> , virtual, 2021.	L. Schmodde 75% M. C. Wehner 25%

Table 1-1 continued.

Essay	Title	Theoretical perspective(s)	Research objectives	Method and sample	Results and contributions	Current status	Conferences	Share of contributions
III	Daily emotion regulation strategies and their impact on employee creativity and performance	Conservation of resources (COR) theory	<ul style="list-style-type: none"> - This study investigates the impact of emotion regulation strategies on employee creativity and performance, recognizing these behaviors as critical resources for small firm success. - This study investigates the impact of deep acting and surface acting on creativity and performance with a resource-based view. Additionally, the study explores emotion regulation ability as an influencing factor. 	Quantitative daily diary study across one week with 103 employees (440 observations)	<ul style="list-style-type: none"> - Daily surface acting negatively affected creativity and performance, mediated by affective well-being; emotion regulation ability acted as moderator. Daily deep acting positively influenced these outcomes. - Results provide new insights into the complex role of deep acting on employee behaviors, which has shown unclear results so far, and highlight the significance of emotion regulation ability. 	Submitted to <i>Journal of Management Studies (JMS)</i> (under review)	Presented at - 23rd European Academy of Management Conference (EURAM), Dublin, Ireland, 2023. - 83rd Annual Meeting of the Academy of Management (AOM), Boston, USA, 2023.	L. Schmodde 85% M. C. Wehner 15%
IV	Employees' daily sleep quality and emotion regulation at work	Model of sleep and self-regulation	<ul style="list-style-type: none"> - Linking to the trend towards emotional well-being at work, this study examines employees' daily sleep quality. - Deep acting and surface acting are known to affect employees' sleep quality, but the reverse effect of sleep quality on deep acting and surface acting is unclear. - With a diary study, this study investigates the impact of employees' daily sleep quality on their emotion regulation ability and the use of emotion regulation strategies at work. 	Quantitative daily diary study across one week with 103 employees (440 observations)	<ul style="list-style-type: none"> - Higher sleep quality was linked to better daily emotion regulation ability, which in turn led to less surface acting (but not deep acting). - Perceived display rules moderated the relationship between sleep quality and surface acting. - Results highlight the importance of sleep quality in enhancing emotion regulation ability, and indicate that good sleep can indirectly reduce surface acting, a strategy potentially harmful to well-being and performance. 	Submitted to <i>Journal of Occupational and Organizational Psychology</i>	Presented at - 84. Wissenschaftliche Jahrestagung des Verbandes der Hochschullehrerinnen und Hochschullehrer für Betriebswirtschaft e.V. (VHB), Lüneburg, 2024. Submitted to - 24th European Academy of Management Conference (EURAM), Bath, UK, 2024. - 84th Annual Meeting of the Academy of Management (AOM), Chicago, 2024.	L. Schmodde 100%
	Total contribution							345%

1.2 Research objectives of the four essays

The entrepreneurial journey is comparable to an emotional rollercoaster, marked by intense emotional experiences (Cacciotti & Hayton, 2015; Schindehutte et al., 2006; Shepherd et al., 2011). Entrepreneurs constantly need to maintain emotional stability to be high-performing, especially under pressure and uncertainty (Thompson et al., 2020). Emotion regulation ability as well as the use of suitable emotion regulation strategies can help in persisting through setbacks (He et al., 2018), ensuring functioning of their firms during challenging times (Huy & Zott, 2019), and inspiring confidence and innovation in employees and investors (Burch et al., 2013). Research in entrepreneurship has so far primarily focused on the mere experience of positive and negative emotions, their triggers (e.g., stress, uncertainty), and their impact on performance and well-being (Delgado-García et al., 2015; Fodor & Pinteá, 2017; Williamson et al., 2022). However, entrepreneurs can also regulate and adjust their emotions (Mauss et al., 2007) to foster entrepreneurial behavior, performance, and learning (Shepherd, 2003; Zampetakis et al., 2017).

In parallel to the aforementioned definitions of emotion regulation strategies and emotion regulation ability, many other conceptualizations have emerged in the literature, that also address the question of how employees deal with negative emotions in the work context (Grandey & Melloy, 2017; Peña-Sarrionandia et al., 2015). These include different conceptualizations of emotion regulation as a strategy (both situation-specific and as a trait) that focus on the two distinctions of reappraisal and suppression rather than deep acting and surface acting (Gross, 1998), as well as emotion-focused coping as a form of coping with stressors at work as opposed to problem-focused coping (Lazarus, 2006). In terms of conceptualizing emotion regulation as an ability, scholars have also explored several variations of theoretical lenses, with the concept of emotional intelligence (Salovey & Mayer, 1990) being the most popular one.

Despite the common goal of understanding the modifiability of emotions, these concepts (i.e., emotion regulation, emotional intelligence, emotion-focused coping) are often studied in isolation (Gross, 2015; Peña-Sarrionandia et al., 2015), particularly in the entrepreneurial context. To date, there is no systematic integration, leading to an inconsistent state of the literature and preventing a comprehensive understanding of how entrepreneurs can effectively manage their own and others' emotions (De Cock et al., 2020).

Recognizing this gap, the first essay in this dissertation encompasses a systematic integrative review that synthesizes findings from research traditions surrounding emotional intelligence, emotion regulation, and emotion-focused coping in the entrepreneurial context. By using “emotion management” as an umbrella term for the concepts of emotional intelligence, emotion regulation, and emotion-focused coping (Olson et al., 2019; Peña-Sarrionandia et al., 2015), this essay unifies and gives an overview of the scattered literature. The goal is to extend literature by providing insights into the different research directions and uncovering overlooked perspectives of emotion management as well as contextual factors, in order to inform the respective research communities and encourage innovative future research questions (Cronin & George, 2020). Hence, the first essay poses the research question:

Research question Essay I: *What is the current state of the literature on emotion regulation, emotional intelligence, and emotion-focused coping in the entrepreneurial context, and what are the resulting implications for future research?*

Following this broad examination of existing and related concepts, Essay II narrows the focus to the core of this dissertation, namely, the concept of emotion regulation. This second essay addresses the observation that extant literature has so far predominantly investigated emotion regulation from an intrapersonal perspective (Gabriel et al., 2020). In contrast to that, this essay takes an interpersonal perspective, acknowledging the interdependency of individuals within organizations and the consequential effects of their

actions on others, specifically, the impact of leaders' emotion regulation on employees (Fisk & Friesen, 2012; Groth et al., 2023; Moin, 2018; Wang & Seibert, 2015).

In this essay, comprising a hypothetical scenario, the contextual focus encompasses a crisis situation in a young firm, defined as a firm with an age of less than 10 years (Haltiwanger et al., 2013). Young firms are still in the volatile early stages of business, where both the leaders and employees frequently face intense emotional experiences, especially during times of crisis (Cacciotti & Hayton, 2015). Furthermore, those firms are different from larger and established firms where setbacks could be potentially more easily compensated for. It is evident that effective interpersonal emotion regulation of leaders in such times is vital, for example, to ensure employees' job engagement and affective commitment (Madera & Smith, 2009; Wu et al., 2021).

However, the question remains which emotion regulation strategy (i.e., deep acting, surface acting, or the display of genuine emotions) would be most beneficial during crisis. According to the emotions-as-social-information (EASI) model, displayed emotions contain information that observers evaluate and, in response, adapt their affective reactions, behavior, and attitudes (van Kleef, 2009). Leaders in young firms are often described as particularly optimistic and passionate (Hmielecki & Baron, 2009). However, as the density of adverse circumstances is particularly high in the context of young firms (Anwar et al., 2023; Schindehutte et al., 2006), even experienced and resilient leaders are no strangers to experiencing negative emotions, such as fear (Dasborough & Scandura, 2021). At the same time, the open display of negative, genuine emotions in the workplace—such as fear—is still an unspoken taboo in many firms, especially among leaders (Humphrey, 2012; Humphrey et al., 2008). Extant research assumes that the open display of negative emotions, such as fear, can lead to a negative emotional spiral in a firm, as employees potentially adopt the negative emotions of their leaders, which is also called emotional contagion (Barsade, 2002). These

negative emotions could then spread among employees, potentially leading to demotivation, which could be a problem, especially in already uncertain times (Madera & Smith, 2009).

As an alternative to expressing genuine emotions, leaders might adopt emotion regulation strategies. However, these strategies, especially surface acting, carry the risk of being perceived as inauthentic, potentially leading to negative outcomes as well (Fisk & Friesen, 2012). In conclusion, neither openly displaying fear nor resorting to emotion regulation strategies offer unequivocal benefits for employees' reactions. Hence, the aim in the second essay is to answer the question of which of the three available strategies—showing genuine emotions, deep acting, or surface acting—is most effective from an interpersonal perspective in a crisis situation, using an experimental vignette design. This leads to the following research question:

Research question Essay II: *Which emotional display strategy (i.e., deep acting, surface acting, display of genuine emotions) should leaders choose in front of their employees in the context of a young firm's crisis?*

In Essay III, this dissertation dives deeper into the individual employee experience of emotion regulation, thereby taking an intrapersonal perspective. In contrast to the limited literature on interpersonal emotion regulation, research on intrapersonal effects of emotion regulation strategies, albeit predominantly in the service context, has already a long history (Gabriel et al., 2023; Grandey & Melloy, 2017). Emotion regulation strategies, especially surface acting, can have detrimental effects on employees' resources, because the faking of emotions is effortful (Sayre et al., 2021; van Gelderen et al., 2017; Xanthopoulou et al., 2018). Existing meta-analyses have shown that surface acting leads to burnout (Mesmer-Magnus et al., 2012), stress, exhaustion, and decreased job satisfaction (Kammeyer-Mueller et al., 2013), as well as decreased well-being, job attitudes, and performance (Hülshager & Schewe, 2011). Deep acting, in contrast, has been shown to have a positive relationship with

emotional performance (Hülshager & Schewe, 2011), job satisfaction, and job performance (Kammeyer-Mueller et al., 2013), but no relationship with burnout (Mesmer-Magnus et al., 2012), well-being, and job attitudes (Hülshager & Schewe, 2011).

The use of ineffective emotion regulation strategies poses a significant challenge for employees who work in small firms that are typically equipped with a smaller workforce and therefore less resources in general (Greene et al., 1997). Ensuring that employees have the ability to regulate their emotions effectively is therefore not just a matter of personal well-being, but a strategic imperative for a small firm. Moreover, in small firms, teams are typically close-knit (Atkinson, 2008). This implicates that emotion regulation strategies play a pivotal role for the individual employee and the collaboration of coworkers within teams (Gabriel et al., 2020; Troth et al., 2018).

To better understand how employees' emotion regulation strategies affect their day-to-day work in small firms, this study utilizes a daily diary approach across one week. Taking the perspective of the conservation of resources (COR) theory (Hobfoll, 1989), this study aims to explore its impact on key factors which are vital for the performance and success of small firms, in particular, emotional well-being, creativity, as well as in-role and extra-role performance. Additionally, this study examines the moderating effect of emotion regulation ability. Research on how emotion regulation ability influences emotion regulation strategies is limited (Gabriel et al., 2023), especially the role of this ability as a general trait variable that could influence daily outcomes. This is a critical research gap, as the use of emotion regulation strategies is dynamic in nature (Judge et al., 2009; Wagner et al., 2014). Hence, the collection of diary data is particularly fitting to get deeper and more precise insights into these processes, allowing for better understanding of these relationships.

In contrast to the second essay, the third essay only examines the consequences of deep acting and surface acting, as those strategies have been shown to be potentially

problematic for employees' health and behaviors at work (Gabriel et al., 2023; Grandey & Melloy, 2017). This essay poses the following research question:

Research question Essay III: *How do employees' daily emotion regulation strategies (i.e., deep acting and surface acting) influence creativity and performance at work, and how does general emotion regulation ability impact these relationships?*

Finally, in Essay IV, I take a step back and examine the *antecedents* of emotion regulation, specifically, employees' daily sleep quality, which potentially influences emotion regulation ability, and in turn, the use of emotion regulation strategies (Barnes, 2012). As examined in both Essays II and III, and shown by extant literature, the use of surface acting can have harmful interpersonal and intrapersonal outcomes, hence, it is vital to gain knowledge on which factors can prevent individuals from engaging in surface acting and fostering more deep acting at work (Grandey & Melloy, 2017). One of these factors could be employees' daily cognitive resources that may impact their use of emotion regulation strategies (Ni Zhang et al., 2022). A crucial antecedent for individuals' resources and energy, in turn, is their sleep quality (Barnes, 2012).

Surprisingly, research regarding the relationship between sleep quality and emotion regulation is relatively limited, although it is commonly acknowledged that good sleep plays a vital role for other outcome variables, such as motivated behavior at work (Barnes, 2012; Barnes & Watson, 2019; Williamson et al., 2019). While there is initial evidence that sleep quality increases emotion regulation ability (Guarana et al., 2021; Mauss et al., 2013), the relationship between sleep quality and emotion regulation strategies has only been explored from the perspective of sleep quality as an outcome of regulation strategies: In particular, extant research has shown that surface acting leads to decreased sleep quality (Fouquereau et al., 2019; Gu et al., 2020; Wagner et al., 2014; Yeh et al., 2020), while the effect of deep acting on sleep quality remains unclear (Yeh et al., 2020).

However, sleep quality may also be a precursor for emotion regulation (Barnes, 2012), and could hence be an influential factor that should be considered by organizations to ensure healthy behaviors at work. In Essay IV, therefore, the reverse perspective of existing research is taken, and the impact of employees' daily sleep quality on the use of emotion regulation strategies is examined. As a specific organizational context, again, the small firm context is chosen. As already emphasized in Essay III, small firms typically have limited resources (Greene et al., 1997) and close working relationships between coworkers (Atkinson, 2008), and thus the use of beneficial emotion regulation strategies, which are potentially enhanced by emotion regulation ability (Grandey & Melloy, 2017), is crucial in such environments, as they potentially contribute to effective collaboration (Gabriel et al., 2020).

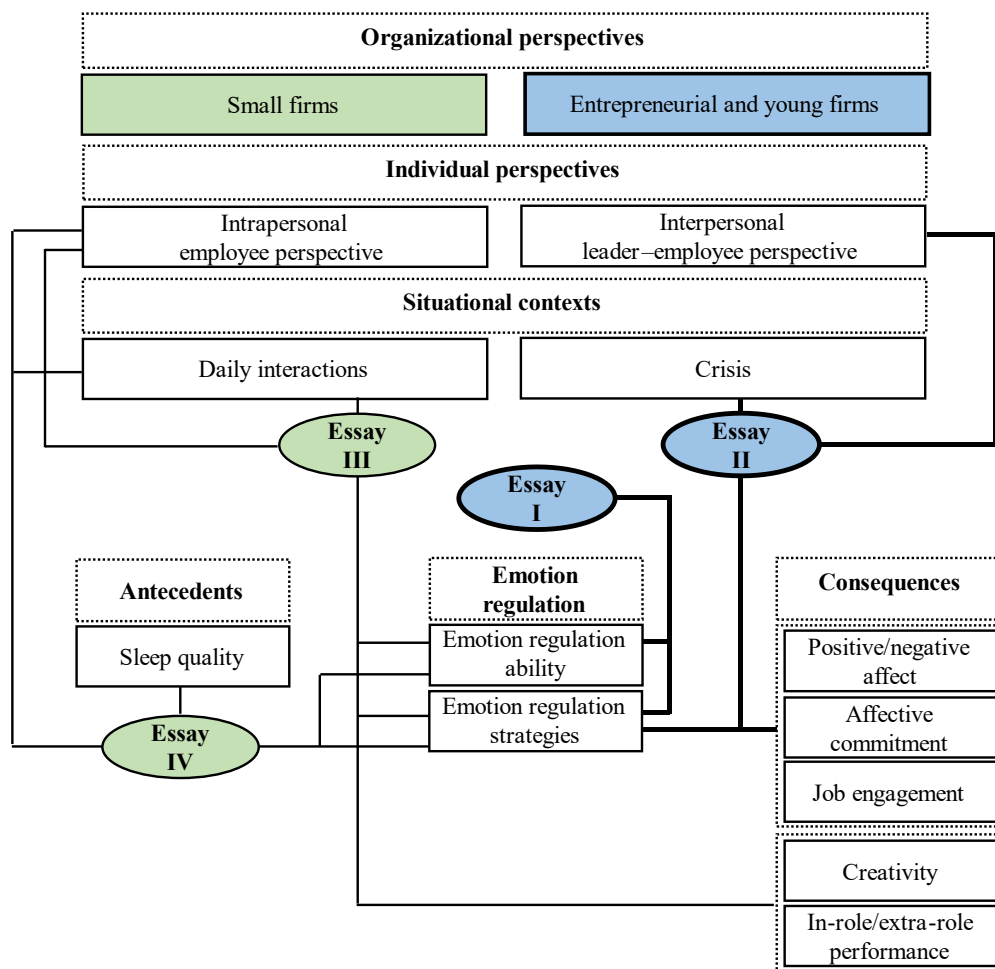
Employing the model of sleep and self-regulation (Barnes, 2012) that assumes a relationship between sleep quality and the emotional component of self-regulation, that is, emotion regulation, I collected data with a one-week diary study by using the same dataset as in Essay III. Although overlapping in investigating deep acting and surface acting, Essay IV treats these two strategies as outcome variables rather than predictors. As a result, there is no overlap between the two studies, aside from the two common variables of deep acting and surface acting. This distinct approach allows for a unique and focused exploration in each study. To explore the relationship between sleep and emotion regulation—both as an ability and as strategies—I investigate the following research question:

Research question Essay IV: *How does employees' daily sleep quality impact daily emotion regulation ability and the use of emotion regulation strategies (i.e., deep acting and surface acting) at work?*

In **Figure 1-1**, the interrelationships of the four essays are illustrated. As described in the previous sections, the four essays include both intrapersonal and interpersonal perspectives, encompassing daily work scenarios as well as extraordinary situations, such as a

crisis. Additionally, the dissertation highlights both antecedents and consequences of emotion regulation in these settings. With regard to the emotion regulation concept, the essays place a specific focus on emotion regulation strategies and the influencing role of emotion regulation ability. Finally, the exploration is uniquely tailored to entrepreneurial, young, and small firms, moving beyond traditional service contexts.

Figure 1-1: Overview of the four essays in the research context of emotion regulation



1.3 Contribution of the dissertation to emotion regulation research

The contribution of this dissertation is threefold. First, this dissertation explores the antecedents and consequences of emotion regulation in non-service contexts, specifically the unique settings of entrepreneurial, young, and small firms, thereby diverging from prior research that predominantly focused on service environments and emotion regulation in response to customer misbehavior (Dudenhöffer & Dormann, 2013; Gabriel et al., 2023;

Grandey, 2000; Grandey et al., 2004; Grandey & Gabriel, 2015; Grandey & Melloy, 2017).

The focus on these organizational environments marked by stress, uncertainty, and limited resources leads to novel situational contexts (e.g., crisis contexts), antecedents (e.g., sleep quality), and outcome variables (e.g., creativity) of emotion regulation, which I will study in this dissertation. This broadens the currently relatively narrow focus of emotion regulation research on well-being, health, and job satisfaction outcomes (Gabriel et al., 2023), thereby also shedding light on cases when emotion regulation can have beneficial outcomes (Lennard et al., 2019; Troth et al., 2018). With regard to consequences, this dissertation also reveals a novel perspective on the traditional distinction between deep acting and surface acting by comparing their context-specific consequences with the third strategy of showing genuine emotions and its impact on observers (Batchelor et al., 2018; Glomb & Tews, 2004).

Second, this dissertation examines emotion regulation from two perspectives, namely, emotion regulation as a set of strategies and emotion regulation as an ability (Gabriel et al., 2023; Grandey & Gabriel, 2015). This dual perspective addresses a gap in existing literature, which has primarily examined emotion regulation either as an ability or a strategy, while research on the interrelationship of both is still scarce (Scherer et al., 2020). Understanding the antecedents and consequences of emotion regulation by integrating both angles is vital because emotion regulation ability can affect the implementation and effectiveness of emotion regulation strategies, and conversely, the strategies employed can influence individuals' emotion regulation ability in the long term (Grandey & Melloy, 2017; Gross, 2015). Shedding light on the perspective of emotion regulation ability as a stable characteristic (Brackett et al., 2006), this dissertation examines its moderating influence on the relationship between daily emotion regulation strategies and employees' affective well-being in the third study. In contrast, in the fourth study, I investigate the daily changing emotion regulation ability

(Lavender et al., 2017; Pavlacic et al., 2022) as a mediating mechanism between employees' daily sleep quality and the use of emotion regulation strategies.

Third, the essays in this dissertation explore emotion regulation from both intrapersonal (Grandey, 2000) and interpersonal (Little et al., 2013) perspectives. While previous research has predominantly focused on the intrapersonal effects of emotion regulation, often highlighting the adverse consequences of surface acting on well-being and job satisfaction (Gabriel et al., 2023; Little et al., 2013), this dissertation broadens the scope, and delves into the day-to-day aspects of emotion regulation abilities and strategies (Gabriel et al., 2023; Judge et al., 2009; van Gelderen et al., 2017). Additionally, the dissertation examines the interpersonal consequences of emotion regulation, underscoring its significance in influencing one's environment at work (Fisk & Friesen, 2012; Gabriel et al., 2023; Troth et al., 2018), specifically how leaders' emotion regulation during crises contributes to sustaining employee engagement and commitment (Batchelor et al., 2018).

By exploring how emotion regulation can enhance well-being, commitment, creativity, and performance in the dynamic environments of entrepreneurial, young, and small firms, these essays also contribute to the wider conversation on workplace well-being, particularly during uncertain times (Anwar et al., 2023; Blustein et al., 2023; Sonnentag et al., 2023). These aspects are becoming increasingly vital in the workplace—not only in the contexts studied in this dissertation, but also in established and larger firms. Firms need to remain innovative through their employees' commitment, engagement, creativity, and performance (de Jong & Den Hartog, 2007; Laguna et al., 2021; Lua et al., 2023). Furthermore, employees increasingly seek meaningful work where they can identify with their tasks and maintain their well-being (Blustein et al., 2023; Sonnentag et al., 2023), which can be impaired or improved by employing emotion regulation (Gabriel et al., 2023), which is crucial in virtually any type of organization.

2. Integrating emotion regulation, emotional intelligence, and emotion-focused coping in the entrepreneurial context: A review and research agenda¹ (Essay I)

Abstract

Existing research in the entrepreneurial context tends to treat emotions as static phenomena, paying limited attention to the question of how entrepreneurs can actively shape their emotional experiences through emotion management to enhance their well-being and performance. Furthermore, the exploration of how entrepreneurs manage their emotions to sustain their entrepreneurial activities often employs different concepts and terminologies, resulting in a fragmented literature that lacks continuity. To extract a common thread from this research field, we conducted a systematic integrative review and integrated research on emotional intelligence, emotion regulation, and emotion-focused coping in the entrepreneurial context using the umbrella term of emotion management. With a comprehensive framework, we organised the emotion management literature around perspectives as an entrepreneur's individual ability, a trait, and situation-specific strategies. Additionally, we highlighted contextual factors, specifically macro- and meso-level factors, individual factors, antecedents, and consequences. Drawing on our findings, we reveal existing gaps and propose future directions for emotion management in entrepreneurship research.

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- *22nd European Academy of Management Conference (EURAM)*, Winterthur, Switzerland, June 15-17, 2022.
- *82nd Annual Meeting of the Academy of Management (AOM)*, Seattle, USA, August 5-9, 2022.

2.1 Introduction

The entrepreneurial context is commonly seen as an emotional rollercoaster ride, characterised by heightened emotions (Cacciotti & Hayton, 2015; Schindehutte et al., 2006; Shepherd et al., 2011; Waldman et al., 2024). To date, research on emotions in entrepreneurship has predominantly focused on the experience of either positive or negative emotions, their antecedents (e.g., stress, uncertainty, success), and their consequences on entrepreneurial performance and well-being, which is also reflected by existing systematic reviews on emotions in the entrepreneurial context (for reviews on emotions in the entrepreneurial context, see Delgado-García et al., 2015; Fodor & Pinteá, 2017; Williamson et al., 2022).

However, emotions are neither static nor just positive or negative; instead, emotions can be *managed* to achieve certain goals (Brundin et al., 2021; Frese & Gielnik, 2023), for instance, to attain entrepreneurial behaviour, performance, and learning (Shepherd, 2003; Zampetakis et al., 2017). Extant research in the entrepreneurial context utilises a broad variety of theoretical lenses to describe the phenomenon of emotion management, thereby encompassing concepts of emotional intelligence (Mayer & Salovey, 1997), emotion regulation (Grandey, 2000; Gross, 1998), as well as emotion-focused coping (Lazarus & Folkman, 1984). Although stemming from different theoretical traditions, these concepts focus on the manageable, modifiable nature of emotions, and they explore individuals' efforts to respond to emotional demands and the modification of one's own or others' emotions (Gross, 2015; Olson et al., 2019). Surprisingly, these concepts have been evolved rather separately in entrepreneurship research. Thus, our understanding on how entrepreneurs can effectively manage their own and others' emotions to maintain their entrepreneurial activities, performance, and well-being is still fragmented (De Cock et al., 2020; Engel et al., 2021). Therefore, there is a need for more systematic knowledge about emotion management for

both entrepreneurial theory and practice, given that effective emotion management is essential for the well-being and performance of founders and employees, which in turn is crucial for the survival of new and emerging ventures (Shepherd, 2020; Stroe et al., 2020; Waldman et al., 2024).

With a systematic integrative review aimed at uniting and thus integrating different research strands (Cronin & George, 2020; Radu-Lefebvre et al., 2021), we assimilate existing findings from the different research traditions of emotional intelligence, emotion regulation, and emotion-focused coping, and subsume them under the umbrella term emotion management (Peña-Sarrionandia et al., 2015). In line with recommendations for integrative reviews (Cronin & George, 2020; Radu-Lefebvre et al., 2021), we conduct a systematic keyword search, and construct first-order, second-order, and third-order themes. Based on our findings, we provide a framework for a comprehensive picture of entrepreneurial emotion management, which, in turn, reveals five specific areas for future research.

The objective of this systematic integrative review is to enrich the emerging field of entrepreneurial emotion management by summarising current knowledge across various perspectives on emotion management and related contextual factors. Specifically, we aim to draw insights from distinct research traditions to inform the respective academic communities and stimulate new, innovative research by uncovering areas currently hidden due to siloed thinking within these communities (Cronin & George, 2020).

Our contribution to the literature is threefold. First, by reviewing the literature from the different research traditions emotional intelligence, emotion regulation, and emotion-focused coping, we structure the current state of the literature with a comprehensive integrative framework. This framework provides an overview of different perspectives of entrepreneurial emotion management, as well as contextual factors, including macro- and meso-level factors, individual factors, antecedents, and consequences. We underscore the

commonalities and distinctions among the various research traditions in their approaches to entrepreneurial emotion management and in their examination of contextual factors. Through this, we aim to foster the evolution of the entrepreneurial emotion management literature, which is presently marked by scholars employing disparate theoretical lenses in parallel (Cronin & George, 2020).

Second, we specifically examine entrepreneurial emotion management along the three perspectives as an individual ability, a trait, or as situation-specific strategies, and we illuminate the differences and connections between these perspectives. By concurrently exploring all three perspectives, we extend prior research that typically focused on just one perspective at a time. Integrating these perspectives allows for a more nuanced understanding of emotion management and emphasises that it is a multifaceted construct: Effective entrepreneurial emotion management requires developing individual abilities, leveraging personal traits, and applying suitable strategies in specific situations.

Third, we highlight existing gaps in the reviewed literature and derive five avenues for future research. These directions involve further exploring the connections between the emotion management perspectives, delving deeper into macro- and meso-level factors, such as different organisational predispositions, as well as individual factors, with a particular emphasis on the under-researched interpersonal perspective. Additionally, we suggest a more nuanced examination of the antecedents of emotion management, moving away from a general perspective of managed emotions, and a more diversified investigation of consequences, including potential negative effects of entrepreneurial emotion management.

2.2 Emotion management research traditions

To date, various research traditions related to emotion management have been studied predominantly independently in separate scholarly communities, particularly in the context of organisations (Peña-Sarrionandia et al., 2015). In this systematic integrative review, we place

a particular emphasis on the entrepreneurial domain, where the study of emotion management is still relatively limited (De Cock et al., 2020; Engel et al., 2021; Frese & Gielnik, 2023).

By examining the topic in this context and systematically reviewing it in an integrative manner, we hope to provide a theoretical impetus to advance the literature as valuable insights from different communities could be shared and integrated, which would promote the growth and refinement of this field (Cronin & George, 2020). From a practical perspective, further advances in understanding emotion management are of great importance, especially in the entrepreneurial context where emotional experiences prosper (Schindehutte et al., 2006; Waldman et al., 2024). Effective management of emotions is central to maintaining individual well-being and performance amid the uncertainties and stressors that entrepreneurs face (Drnovsek et al., 2010; Nikolaev et al., 2020). In addition, mastering emotion management is critical to maintaining successful relationships with customers, investors, and employees (Batchelor et al., 2018; Burch et al., 2013).

Existing literature primarily examines how individuals can deal with negative emotions in order to benefit from the upregulation of emotions (Gross, 2015). At the same time, it is certainly possible to manage *positive* emotions, for instance, to appear more serious during negotiations, and there is also evidence that the experience of negative emotions is not always detrimental for attitudes and behaviours (George & Zhou, 2002). However, the vast majority of the emotion management literature either implicitly or explicitly focuses on the occurrence of unwelcome, stressful, or negative emotions that individuals aim to overcome by regulating them or by coping with them (Gross, 2015). In the entrepreneurial context, this encompasses the exploration of how, why, and when entrepreneurs (should) manage negative emotions that occur during either extreme situations, like failure or crisis, or everyday challenges (Cacciotti & Hayton, 2015).

Three main research traditions have evolved that scholars use to describe the phenomenon of emotion management, namely emotional intelligence, emotion regulation, and emotion-focused coping. First, *emotional intelligence* (Goleman, 1998; Mayer & Salovey, 1997), which includes the subdimension “to regulate one’s own and others’ emotions” (Mayer & Salovey, 1997, p. 11), surprisingly evolved mainly independently from concepts surrounding emotion regulation in both the psychology and organisational literature (Peña-Sarrionandia et al., 2015). With its other subdimensions (perceive and appraise emotions accurately, access and evoke emotions when they facilitate cognition, comprehend emotional language, and make use of emotional information) (Mayer & Salovey, 1997, p. 11), emotional intelligence has received significant attention as a driver for various positive outcomes on the individual and firm level (Miao et al., 2017). Emotional intelligence can be seen as a concept that resides at a theoretically higher level above emotion regulation and emotion-focused coping, as emotional intelligence can influence the extent to which individuals are able to manage their own emotions by using different strategies as a trait or in a specific situation (Peña-Sarrionandia et al., 2015). Emotional intelligence is typically measured with different subdimensions, with the regulation of emotions being one of them (Mayer & Salovey, 1997). In contrast to the emotion regulation and emotion-focused coping traditions, emotional intelligence does not involve the use of specific strategies to manage emotions, but rather the general ability to monitor own and others’ emotions which guides individuals’ behaviour (Mayer & Salovey, 1997).

Second, research on *emotion regulation* conceptualises the management of emotions as individuals’ suppression and reappraisal of emotions for both intrinsic and extrinsic purposes (Gross, 1998), or individuals’ deep acting and surface acting to manage emotions in front of others (Grandey & Melloy, 2017; Hochschild, 1983). Specifically in the service sector, but increasingly in other organisational domains, emotion regulation is also known as

emotional labour, which is the regulation of emotions as part of the job (Grandey & Gabriel, 2015). Furthermore, there have been various approaches to conceptualise specific emotions as being able to regulate the experience of other emotions (i.e., positive emotions regulate negative emotions) (Stroe et al., 2020), that can be subsumed under the emotion regulation tradition.

The third related concept is *emotion-focused coping*, which stems from research on individuals' reactions to stressors (Gross, 2015; Lazarus, 2006). Emotion-focused coping is defined as the regulation of emotional reactions that are evoked by stressors, while the emphasis of problem-focused coping is finding a solution to the stressor itself (Lazarus & Folkman, 1984). Like research on emotion regulation, research in this field commonly discerns various specific forms of emotion-focused coping (e.g., venting, denial, or disengagement) (Lazarus & Folkman, 1984), representing a notably diversified approach towards examining the emotion management process. This approach contrasts with the emotional intelligence domain, where a majority of studies predominantly adopts a broad conceptual framework for understanding emotion management, lacking specific delineation of distinct techniques. The particularities of the various research traditions in the specific entrepreneurial context will be discussed in the remainder of this review.

2.3 Review method

2.3.1 Data collection

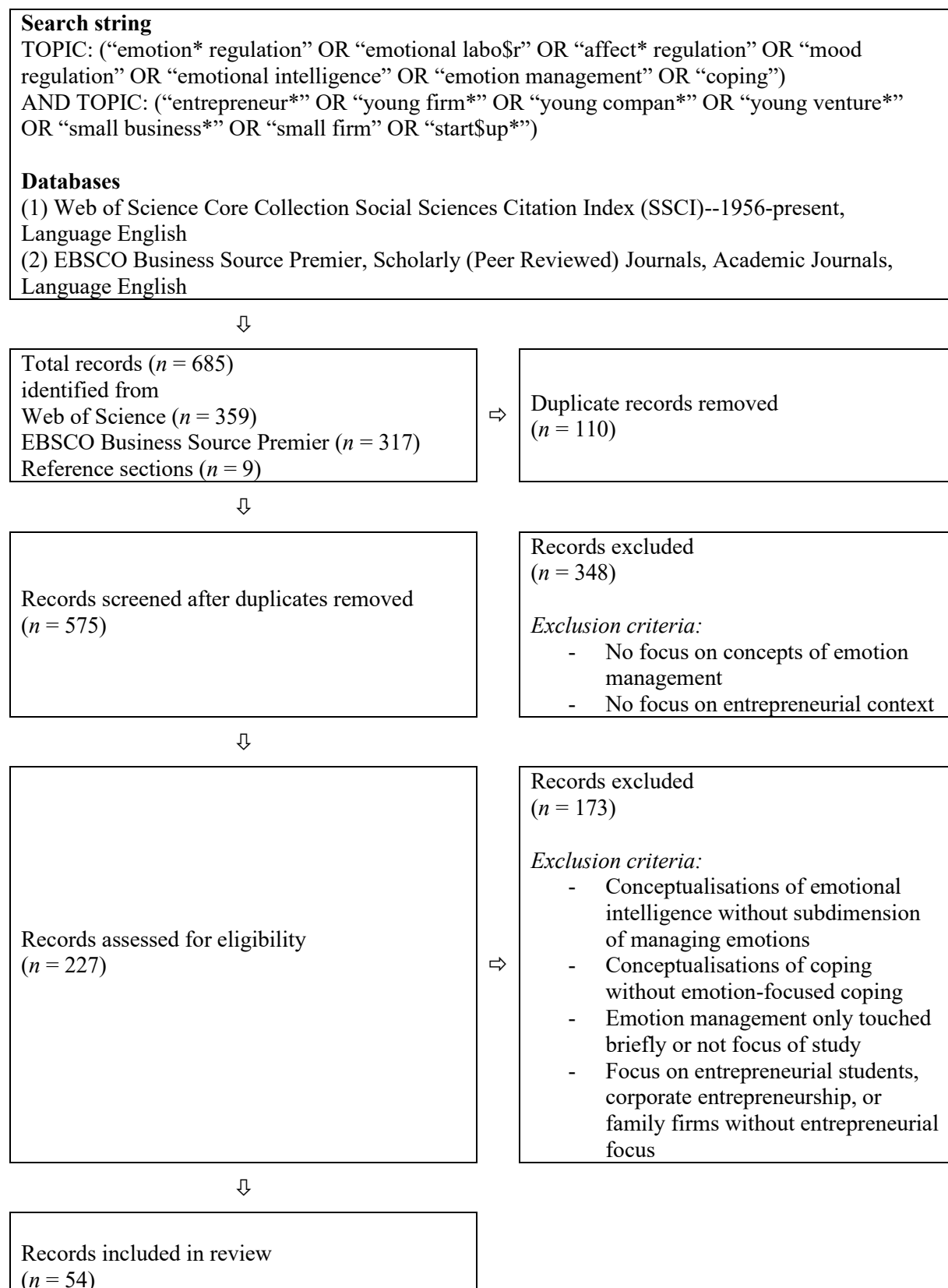
As a first step of our systematic integrative review, we determined the keywords for our search process. The flow diagram of the search and screening process, including the search string, is presented in **Figure 2-1** (Page et al., 2021). Since entrepreneurial emotion management has been investigated by using a variety of different concepts, we included these varying terms (i.e., emotion management, emotion regulation, emotional labour, emotional intelligence, and emotion-focused coping) into the first part of our search string. To cover all

relevant literature, we also included the keywords “mood regulation” and “affect regulation” as related concepts (Gross, 2015). We combined this first part of the search string with a second stack of keywords, determining the entrepreneurial scope of our literature search, such as entrepreneur, venture, or small business. We conducted the systematic keyword search in Web of Science and Business Source Premier, and manually searched in reference sections of our identified articles for potential studies within our scope (Tranfield et al., 2003). Included articles had to be peer-reviewed and published in academic journals, as well as written in English. Apart from that, we did not exclude any journals based on rankings or subject-specific domains, nor did we specify a specific time frame for when articles were published. We conducted the latest search for the current version of this review in December 2022, which yielded 685 independent records including duplicates.

2.3.2 Screening process and exclusion criteria

In line with recommendations of Tranfield et al. (2003), we determined exclusion and inclusion criteria for our screening process, which are also indicated in **Figure 2-1**. After reading the titles and abstracts of our initially identified records, we first excluded all articles that did not refer to the topic of emotions or emotion management (including all targeted sub-concepts) in the entrepreneurial context. For example, the initial sample included articles that dealt with macro-economic or political themes with regard to entrepreneurial firms (e.g., Anton & Onofrei, 2016; Melissanidou & Johnston, 2019), which were not aligned with our defined search and we hence excluded. This screening and exclusion step resulted in 227 studies. We conducted a second exclusion step in which we screened the full texts of our records and assessed these remaining studies for eligibility (Tranfield et al., 2003).

Figure 2-1: Flow diagram of the search process



Note. PRISMA flow diagram adapted from Page et al. (2021).

As our inclusion criteria necessitated that articles had to focus on emotion *management* (i.e., reflected by the regulation or adjustment of emotions) rather than on entrepreneurial emotions in general, we excluded all records that examined emotions without focusing on the regulative, manageable nature of emotions (e.g., Gorgievski et al., 2014).

Another inclusion criterion encompassed that articles had to focus on the entrepreneurial journey, including entrepreneurs who were either in the founding or growth phase of their ventures, or those who had encountered failure. This criterion meant focusing on entrepreneurs who had taken concrete steps towards establishing their business, which could include evaluating or identifying opportunities. Conversely, we excluded studies that centred solely on individuals with entrepreneurial aspirations but no tangible entrepreneurial activities. As a result, articles examining the emotion management of entrepreneurial students with mere intentions to start a business, such as in a study by Shepherd (2004), were not considered for inclusion in our review.

We also excluded articles that focused on employees' emotion management in relation to a corporate entrepreneurship project (e.g., Patzelt et al., 2021), because we aimed to focus on entrepreneurial endeavours in the context of a new venture rather than an existing organisation. Additionally, we excluded articles that focused on small businesses or family firms when the firms studied in these particular articles did not include an entrepreneurial focus (e.g., Radu-Lefebvre & Randerson, 2020). Regarding studies on emotional intelligence, we only included studies that explicitly included the subdimension of regulating own and others' emotions (Mayer & Salovey, 1997) in their definition of emotional intelligence. With regard to studies on emotion-focused coping, we only included studies that explicitly distinguished between emotion-focused and problem-focused coping, and did not only refer to coping as a broad dimension. After this exclusion step, 54 studies remained, which we

included as the final sample for this review. **Table 2-1** summarises all articles, employed methods, concepts, and findings reported in the respective articles.

2.3.3 Data coding

As a first step, we coded all studies descriptively. To achieve a first overview of the included studies, we screened the full texts for common subjects, theoretical constructs, and perspectives (Radu-Lefebvre et al., 2021). We also determined whether the respective article was based on a qualitative ($n = 10$), quantitative ($n = 32$), or conceptual ($n = 5$) study, or if it was a review article or meta-analysis ($n = 7$). Journals included in our review stem from the management and organisational behaviour ($n = 12$), psychology ($n = 9$), and entrepreneurship ($n = 27$) domains. Six articles were published in journals from miscellaneous domains.

After the descriptive coding, we summed up common subjects and constructed second-order themes. As the core of our coding process, we scrutinised the different definitions of emotion management—hence, we first recorded the different conceptualisations of emotion regulation (e.g., suppression and reappraisal), emotional labour with deep and surface acting, emotional intelligence with its subdimension of regulating own and others' emotions, as well as emotion-focused coping (e.g., venting or denial).

In this coding step, we discovered that the literature on these different concepts examined emotion management from different angles related to the role that it serves for the individual. For instance, when studies took the ability perspective, literature defined emotion management as a personal capability to manage emotions in a certain way (Grandey & Gabriel, 2015; Miao et al., 2017). The trait perspective, on the other hand, means that studies conceptualised emotion management as strategies that individuals use chronically or habitually, as a character or personality trait (Miao et al., 2018).

Table 2-1: Included articles in the systematic integrative review

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Ahmed et al. (2022)	Review	Coping	Negative emotions	Strategy	Individual entrepreneur	Growth phase	Resilience	Conceptualisation of coping as underlying mechanism of resilience
Ahmetoglu et al. (2011)	Quantitative	Emotional intelligence	Not specified	Trait	Individual entrepreneur	Growth phase	Entrepreneurial activity, achievement	Positive relationship between emotional intelligence and engagement in innovative activities
Allen et al. (2020)	Meta-analysis	Emotional intelligence	Not specified	Ability	Entrepreneur and stakeholders	Growth phase	Entrepreneurial success	Positive relationship between emotional intelligence and success, stronger correlation than between general mental ability and success
Almeida et al. (2022)	Quantitative	Emotional intelligence	Not specified	Ability	Entrepreneur and others	Growth phase	Entrepreneurial skill	Emotional intelligence shows to be a core soft skill of entrepreneurs
Anderson (1977)	Quantitative	Coping	Emotional or anxiety reactions to stimulus	Trait	Individual entrepreneur	Growth phase	Use of coping style	Self-employed individuals who rely on their internal behaviour perceive less stress and employ more task-centred coping than emotion-centred coping
Batchelor et al. (2018)	Quantitative	Emotional labour	Not specified	Trait	Leader-employee	Growth phase	Employees' job satisfaction, affective commitment, firm performance, turnover intention	Leader genuine emotional labour (enthusiasm and liking) increases employees' job satisfaction, affective commitment, firm performance, and decreases turnover intention
Brooks et al. (2019)	Quantitative	Emotion regulation	Envy	Strategy	Entrepreneur and fellow competitor	Growth phase	Change in envy	Revealing failures regulates malicious envy of observers
Burch et al. (2013)	Conceptual	Emotional labour	Not specified	Strategy	Entrepreneur and stakeholders	Growth phase	Entrepreneurial well-being, stakeholder's emotional response, attitude to entrepreneur and behaviour	Proposition of the "Affective Entrepreneurial Events Model": Emotional labour leads to emergence and well-being of an entrepreneur, affects stakeholders and venture emergence
Byrne and Shepherd (2015)	Qualitative	Coping	Negative emotions	Strategy	Individual entrepreneur	After failure	Making sense of failure	Authors theorise how different emotional states lead to coping strategies which impact how entrepreneurs make sense of business failure
Chirania and Dhal (2018)	Review	Emotional intelligence	Not specified	Ability	Entrepreneur and team	Growth phase	Success	Authors review the literature on emotional intelligence and entrepreneurial abilities, and find that entrepreneurs high in emotional intelligence are more creative and able to identify opportunities

Table 2-1 continued

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Cole et al. (2018)	Quantitative	Emotional intelligence	Not specified	Ability	Team-level	Growth phase	Team collaboration	Emotional intelligence predicts team collaboration, mediated by strengths, aspirations, results
Cornier et al. (2017)	Qualitative	Coping	Grief	Strategy	Individual entrepreneur	After failure	Emotional and psychological functioning	Both emotion-focused coping and problem-focused coping enable stability in emotional and psychological functioning after failure
Cross and Travaglione (2003)	Qualitative	Emotional intelligence	Fear of rejection, criticism, anxiety, frustration	Ability	Entrepreneur and others	Growth phase	Focus despite obstacles, creating inspiration and commitment, transforming negative emotions	Connection of research streams on emotional intelligence and entrepreneurship, which show that regulation of emotions is highest ability of emotional intelligence's subscales
De Cock et al. (2020)	Quantitative	Emotion regulation	Not specified	Trait	Individual entrepreneur	Growth phase	Venture survival	Founders' cognitive reappraisal and expressive suppression negatively influence venture survival
D'Intino et al. (2007)	Review	Emotional intelligence	Negative emotions	Ability	Entrepreneur and others	Growth phase	Self-leadership	Proposition of a reciprocal relationship between emotional intelligence and self-leadership
Dmiovsek et al. (2010)	Quantitative	Coping	Negative emotions	Trait	Individual entrepreneur	Growth phase	Well-being, venture performance	Positive relationship between entrepreneurs' problem-based coping (but not emotion-focused coping) and well-being, self-reported venture performance
Eager et al. (2019)	Qualitative	Coping	Distress	Strategy	Individual entrepreneur	Growth phase	Release of stress levels	Classification of coping strategies by distinguishing between approach/avoidance, change/adapt/disengage and cognitive/affective/behavioural orientations
Engel et al. (2021)	Quantitative	Coping	Fear of failure	Strategy	Individual entrepreneur	Growth phase	Self-compassion	Loving-kindness-meditation increases entrepreneurs' self-compassion
Hatak and Snellman (2017)	Quantitative	Regret regulation	Regret	Trait	Individual entrepreneur	Founding phase	Nascent entrepreneurial activity	Regret regulation during latent entrepreneurship is positively related to entering the stage of nascent entrepreneurship
He et al. (2018)	Quantitative	Emotion regulation	Negative emotions	Ability	Individual entrepreneur	After failure	Learning behaviour	Emotion regulation as moderator for relationship between failure velocity and learning behaviour
Heredia et al. (2022)	Quantitative	Emotional intelligence	Not specified	Ability	Individual entrepreneur	Growth phase	Organisational resilience	Emotional intelligence important for high organisational resilience in China, no results for Central America

Table 2-1 continued

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Hmieleski and Cole (2022)	Quantitative	Coping	Negative emotions	Strategy	Team-level	Growth phase	Firm performance	Relationship between environmental uncertainty and firm performance moderated by high shared coping humour in new venture teams; influence stronger for teams high in team-efficacy
Humphrey (2013)	Conceptual	Emotional intelligence	Negative emotions	Ability	Entrepreneur, employees, and other stakeholders	Growth phase	Resilience, innovativeness, and creativity, success in team work/development of products/leading employees/negotiations	Proposition that entrepreneurs high in emotional intelligence are more resilient, innovative, and creative, more successful in team work/development of products/leading employees/negotiations
Huy and Zott (2019)	Qualitative	Emotion regulation	Not specified	Ability	Entrepreneur and others	Growth phase	Managerial social capital, opportunity identification, strategic change	Regulating own and others' emotions are important for managerial social capital, opportunity identification, and strategic change, linked by legitimacy judgment
Hwang and Choi (2021)	Quantitative	Coping	Fear of failure (re-entry)	Strategy	Individual entrepreneur	After failure	Re-entry	Coping humour of failed entrepreneurs moderates relationship between defensive pessimism and intention to re-enter
Ingram et al. (2019)	Quantitative	Emotional intelligence	Negative emotions	Ability	Entrepreneur and others	Growth phase	Venture performance	Interpersonal recognition and management of emotions positively influences venture performance
Ivanova et al. (2022)	Quantitative	Emotion regulation	Not specified	Strategy	Team-level	Growth phase	Relationship viability, firm survival	Emotion suppression in new venture teams negatively predicts relationship viability, mediated by authenticity and appropriateness; relationship viability/emotion suppression influence firm survival
Jenkins et al. (2014)	Quantitative	Anticipatory appraisal	Grief	Strategy	Individual entrepreneur	After failure	Change in grief	Entrepreneurs react differently to failure, felt grief dependent on appraisal of loss of self-esteem
Kauppinen et al. (2019)	Quantitative	Grief coping	Grief	Strategy	Firm founder and mentor	After failure	Learning behaviour	During mentoring of entrepreneurs, loss orientation in grief coping positively influences learning
Li et al. (2021)	Quantitative	Emotion regulation	Not specified	Strategy	Leader-employee	Growth phase	Entrepreneurial performance	Opportunities and resources positively influence entrepreneurial performance; positively moderated by positive emotion and interpersonal relationship regulation
Lin et al. (2018)	Quantitative	Coping	Not specified	Trait	Individual entrepreneur	Growth phase	Coping humour	Supportive social culture to entrepreneurship leads to more likely use of coping humour
Miao et al. (2018)	Meta-analysis	Emotional intelligence	Not specified	Multiple	Individual entrepreneur	Growth phase	Entrepreneurial intention	Positive relationship between emotional intelligence and entrepreneurial intention, stronger in long-term-oriented cultures

Table 2-1 continued

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Nikolaev et al. (2020)	Quantitative	Coping	Negative emotions	Trait	Individual entrepreneur	Growth phase	Eudaimonic well-being	Entrepreneurs are higher in eudaimonic well-being, as they are more likely to use problem-focused coping than emotion-focused coping
O'Shea et al. (2017)	Conceptual	Emotion regulation	Negative emotions	Strategy	Individual entrepreneur	Growth phase	Entrepreneurial actions	Proposition of a model of self-regulation; emotional, cognitive, and motivational states as interacting factors for entrepreneurial actions
Patel et al. (2019)	Quantitative	Coping	Stressful emotions	Trait	Individual self-employed	Growth phase	Allostatic load	High problem-focused coping leads to less allostatic load, no effect of emotion-focused coping
Pathak and Goltz (2021)	Review	Emotional intelligence	Negative emotions	Ability	Individual entrepreneur	Growth phase	Selection of coping strategies	Proposition of a conceptual model in which entrepreneurs' emotional intelligence influence the selection of coping strategies as well as the coping process itself
Patzelt and Shepherd (2011)	Quantitative	Coping	Fear of failure, loneliness, mental strain, stress, grief	Trait	Individual self-employed	Growth phase	Change in negative emotions	Negative relationship between being self-employed and experiencing negative emotions, both problem- and emotion-focused coping increase this relationship
Ramli et al. (2022)	Qualitative	Emotional labour	Not specified	Strategy	Individual entrepreneur	Growth phase	Firm resilience	COVID-19 pandemic led to entrepreneurial leaders' increased use of emotional labour; emotional labour is both a humanistic and a strategic tool for increasing a firm's resilience
Schlaegel et al. (2021)	Quantitative	Emotional intelligence	Not specified	Ability	Individual entrepreneur	Growth phase	Entrepreneurial intention, behaviour, status	Emotional intelligence has no significant effect at the intention or behaviour stage of entrepreneurial endeavours, but positive relationship with entrepreneurial status in one subsample
Schonfeld and Mazzola (2015)	Qualitative	Coping	Emotional strain	Strategy	Individual self-employed	Growth phase	Successful dealing with stressors	Self-employed frequently report emotional strains, use more problem-focused than emotion-focused coping
Shepherd (2003)	Conceptual	Emotion regulation	Grief	Strategy	Individual entrepreneur	After failure	Learning behaviour	Proposition of a dual process of grief recovery (oscillation and restoration orientation), minimises grief and improves learning from loss of business
Shepherd and Cardon (2009)	Conceptual	Emotion regulation	Negative emotions	Ability	Individual entrepreneur	After failure	Learning from failure	Proposition that self-compassion regulates negative emotional reactions to project failure, which in turn enhances learning from failure

Table 2-1 continued

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Shepherd et al. (2009)	Conceptual	Regulation by anticipated grief	Grief	Strategy	Individual owner-manager	After failure	Financial and emotional costs	Proposition that anticipatory grief plays important role when delaying business failure, thereby minimising grief by failure event
Singh et al. (2007)	Qualitative	Coping	Grief, guilt, depression, despair, anger, frustration	Strategy	Individual entrepreneur	After failure	Self-knowledge	Propose that emotion-focused strategies enhance self-knowledge when re-starting after failure, while problem-focused coping helps in dealing with economic/financial aspects
Sirén et al. (2020)	Quantitative	Emotion regulation	Negative emotions	Trait	Team-level	Founding phase	Leader emergence	Suppression of emotions negatively relates to leader emergence, while reappraisal of emotions positively relates to leader emergence, moderated by team emotions
Stroe et al. (2020)	Quantitative	Regulation by passion	Fear of failure	Trait	Individual entrepreneur	Growth phase	Negative affect	Relationship between dispositional fear of failure and negative affect depends on dualistic regulatory effect of passion
Thompson et al. (2020)	Qualitative	Coping	Anxiety	Strategy	Individual entrepreneur	Growth phase	Translate negative experiences into positive cognitive and behavioural effects	Suggest that all coping responses can be problem- and emotion-focused, propose rethinking of binary categorisation
Torres-Coronas and Vidal-Blasco (2017)	Quantitative	Emotional intelligence	Not specified	Trait	Individual entrepreneur	Growth phase	Proactive networking behaviour	Emotional intelligence positively influences entrepreneurs' proactive networking behaviour
Treffers et al. (2018)	Quantitative	Emotional intelligence	Negative emotional information	Ability	Entrepreneur and others	Founding phase	Venture goal commitment	Emotional intelligence moderates relationship between situational emotional information and venture goal commitment, mediated by opportunity evaluation
Wei et al. (2019)	Qualitative	Emotion regulation	Loneliness, frustration, stigma	Trait	Individual entrepreneur	After failure	Learning from failure	Emotion regulation after failure shows to be a key influencing factor of learning from failure
Yin et al. (2020)	Quantitative	Emotional intelligence	Not specified	Ability	Team-level	Growth phase	Team innovation performance	Team emotional intelligence moderates relationship between leader's cooperative conflict management and team passion, which in turn leads to team innovation performance

Table 2-1 continued

Short citation	Method	Concept	Managed emotions	Emotion management perspective	Intra- or interpersonal perspective	Organisational phase	Consequences	Findings
Yritshaki (2012)	Quantitative	Emotional intelligence	Not specified	Ability	Leader-employee	Growth phase	Growth (sales growth, growth in employees)	Positive relationship between emotional intelligence and growth, mediated by charismatic-inspirational behaviour
Zhang et al. (2022)	Quantitative	Emotional intelligence	Anxiety	Ability	Individual entrepreneur	Growth phase	Coping with stereotype threat	Female entrepreneurs' emotional intelligence positively influences coping with stereotype threat
Zhou and Bojica (2017)	Quantitative	Emotional intelligence	Not specified	Ability	Entrepreneur and stakeholders	Growth phase	Perceived success (employee satisfaction, social responsibility, personal satisfaction, customer satisfaction, business performance)	Positive relationship between entrepreneurs' emotional intelligence and self-perceived success, with ability to regulate emotion of others as strongest influencing factor

Finally, the strategy perspective reflects the use of emotion management in specific situations or contexts (Gross, 2015). While the different concepts surrounding emotion management typically either distinguish between an ability or a trait (Grandey & Melloy, 2017) or between a trait and a strategy perspective (Maxwell et al., 2019), we coded the articles with all three respective categories, as the simultaneous scrutiny of all three perspectives allows us to gain a more comprehensive view on emotion management.

In the next step, we assessed whether the studies in our sample looked at emotion management from an ability, a trait, or a strategy perspective, and coded the articles respectively. This mapping of the studies in our sample led to the second-order themes *individual ability*, *trait*, and *situation-specific strategies*.

Furthermore, we categorised descriptive codes such as culture and perceived uncertainty as *environmental conditions*, subjects such as firm age as *organisational predispositions*, and the investigated entrepreneurial stages (e.g., growth, after failure) as *organisational phases*. As the studies varied in the way they investigated emotion management of individual entrepreneurs or in the context to other stakeholders, we categorised all studies as either reflecting an *intra- or interpersonal perspective*. Furthermore, we summed up variables such as the entrepreneurial experience as *individual predispositions*, and variables such as team-efficacy as *relational predispositions*. Further, we summed up events (e.g., venture obstacles) with the second-order theme *entrepreneurial events* and studied emotions (e.g., fear or failure) with the theme *managed emotions*. As for possible outcomes of entrepreneurs' emotion management, we summed up *individual outcomes* (e.g., entrepreneurial performance) and *venture outcomes* (e.g., venture survival).

During the third abstraction stage, we built five integrative themes (Cronin and George 2020, Radu-Lefebvre et al. 2021) to encapsulate the underlying conceptual dimensions. We categorised the second-order themes individual ability, trait, and situation-

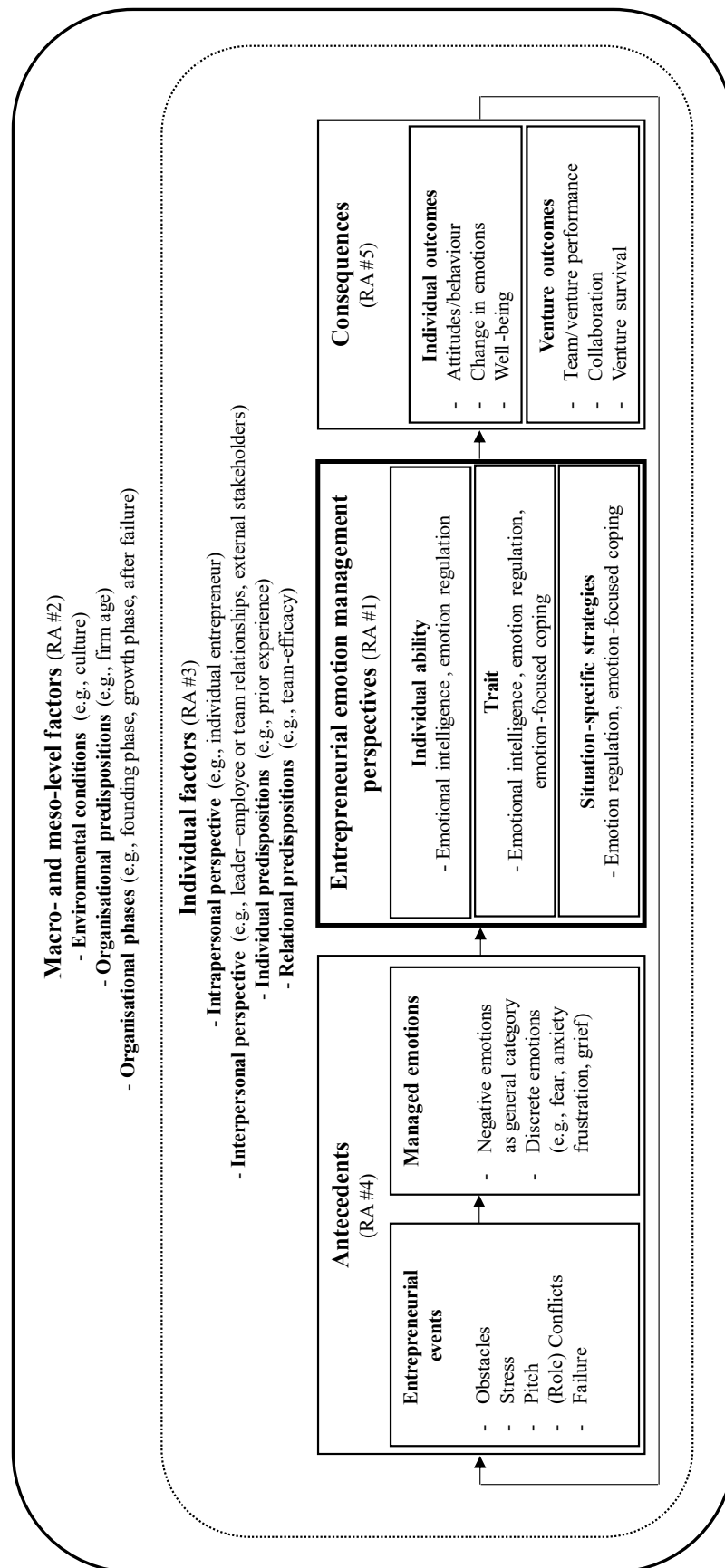
specific strategies as *entrepreneurial emotion management perspectives*. Furthermore, we grouped the second-order themes environmental conditions, organisational predispositions and organisational phases into *macro- and meso-level factors*. We aggregated individual and relational predispositions as well as intra- or interpersonal perspective as *individual factors*, and we consolidated entrepreneurial events and managed emotions as *antecedents*. Finally, we aggregated individual outcomes as well as venture outcomes as *consequences*. The full presentation of the coding themes can be found in the **Appendix A**.

2.3.4 Development of the framework

To put the identified themes in a temporal and contextual relationship to each other, we organised all previously described themes in an integrative framework, which is presented in **Figure 2-2**. Below each third-order theme, the related second-order themes are displayed with respective examples of first-order themes. At the core of the framework, we highlight the three corresponding different perspectives on emotion management—as an *individual ability*, *a trait*, or as *situation-specific strategies*.

The two outer layers *macro- and meso-level factors* and *individual factors* include factors that influence the emotion management process. Furthermore, the core of the framework, that is, entrepreneurial emotion management, is linked to *antecedents* and *consequences* of entrepreneurial emotion management (Burch et al., 2013; Weiss & Cropanzano, 1996). However, this should not reflect a linear process: As also noted by Burch et al. (2013), entrepreneurial emotion management and its consequences influence subsequent events because of the new knowledge and experience acquired during past events. This cycle is indicated in the framework by an arrow that links back from the consequences to the antecedents of entrepreneurial emotion management.

Figure 2-2: Framework of entrepreneurial emotion management with indication of research avenues (RA)



Note. The figure illustrates the third-order themes identified in this systematic integrative review, with corresponding research avenues indicated in brackets. Below each third-order theme, the related second-order themes are visualised, with examples of first-order themes.

2.4 Entrepreneurial emotion management perspectives and concepts

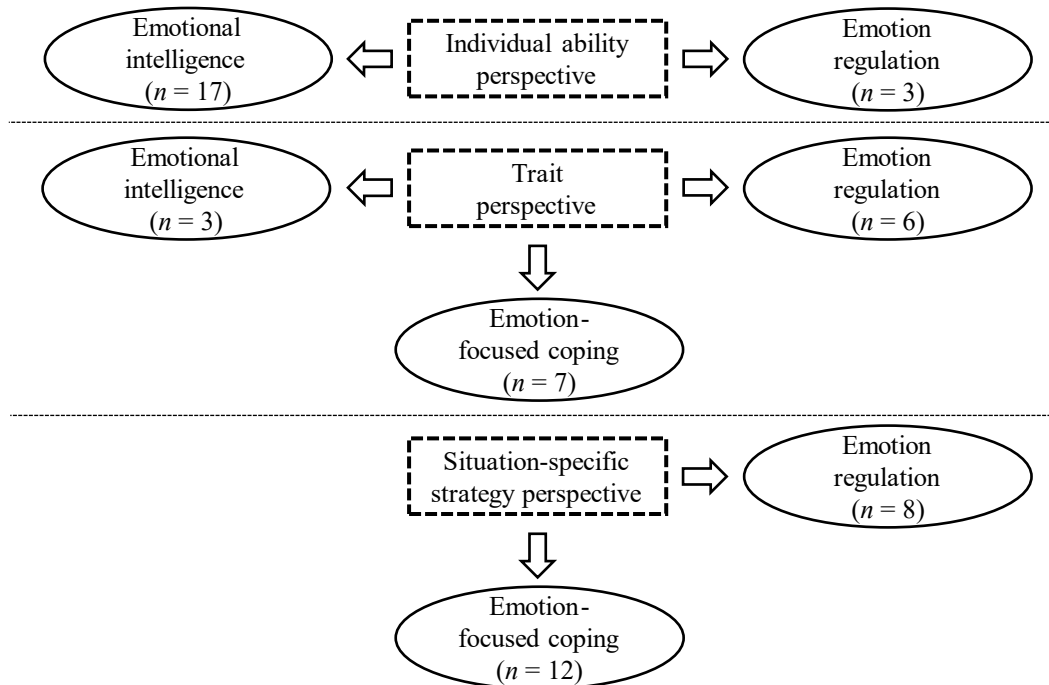
During the screening process, we mapped the core of our framework, the main research concepts emotional intelligence, emotion regulation, and emotion-focused coping, as well as three different perspectives on entrepreneurial emotion management, namely the individual ability, the trait, and the situation-specific strategies perspectives.

When studies took the ability perspective ($n = 19$), scholars defined entrepreneurial emotion management as a personal capability to manage emotions in an appropriate and successful way (Mayer & Salovey, 1997). As visualised in **Figure 2-3**, the ability perspective has been taken in the emotional intelligence and emotion-focused coping research traditions. Entrepreneurial scholars also investigated entrepreneurial emotion management from a trait perspective ($n = 14$), which means that studies conceptualised entrepreneurial emotion management as a mechanism that individuals use habitually or chronically as a trait (Miao et al., 2018), or as a propensity to use certain strategies (Batchelor et al., 2018). The trait perspective has been examined by all three emotion management traditions emotional intelligence, emotion regulation, and emotion-focused coping.

Finally, entrepreneurial emotion management has also been investigated as a set of situation-specific strategies (Peña-Sarrionandia et al., 2015) ($n = 19$), which means that individuals use strategies on purpose or in a specific situation (Engel et al., 2021; Ivanova et al., 2022). Scholars from the emotion regulation and emotion-focused coping research traditions have used the situation-specific perspective. Two articles in our review investigated entrepreneurial emotion management from multiple perspectives, namely, Miao et al. (2018) meta-analytically analysed the concept emotional intelligence from an ability and a trait perspective, and Ahmed et al. (2022) conducted an integrative review on resilience, stress, and coping, and examined emotion-focused coping from a trait and a strategy perspective. We

will elaborate on the different research concepts and the respective perspectives as an individual ability, a trait, and as situation-specific strategies in the following.

Figure 2-3: Emotion management concepts and perspectives



Note. Visualisation of the emotion management perspectives (represented by rectangular shapes; i.e., individual ability, trait, and situation-specific perspective) and concepts (represented by oval shapes; i.e., emotional intelligence, emotion regulation, emotion-focused coping) that scholars study in the entrepreneurial emotion management literature. Scholars adopt the individual ability perspective by employing the concepts of emotional intelligence or emotion regulation, while the trait perspective is studied with the concepts of emotional intelligence, emotion regulation, and emotion-focused coping. The situation-specific strategy perspective is examined by utilising the concepts of emotion regulation or emotion-focused coping.

2.4.1 Entrepreneurial emotional intelligence

In total, 19 studies in this review utilised the emotional intelligence concept. Twelve studies investigated entrepreneurial emotional intelligence as an ability from a quantitative or meta-analytical perspective. With a meta-analysis, Allen et al. (2020) found that emotional intelligence had a stronger influence on entrepreneurial success than the entrepreneur's general mental ability. Zhou and Bojica (2017) found that the ability to regulate emotions is stronger related to perceived entrepreneurial success than the other subdimensions of emotional intelligence, while Ingram et al. (2019) also demonstrated the positive impact of this ability on venture performance. Another study showed the positive impact of team

emotional intelligence on team innovation performance (Yin et al., 2020), thereby highlighting that not only an individual's ability to regulate emotions, but the sum of all team members' emotional intelligence is crucial for success. In stark contrast to these findings, Schlaegel et al. (2021) surprisingly found no significant relationship between emotional intelligence and entrepreneurial intentions.

Five of the identified studies in this review examined emotional intelligence as an ability in the entrepreneurial context from a qualitative, or a conceptual perspective. While they all support the assumption of emotional intelligence as a crucial ability for entrepreneurs, their suggested outcomes on entrepreneurial behaviour, well-being, and success vary. Humphrey (2013) pointed out why emotional intelligence relates to entrepreneurship, that is, among other factors, the ability to handle intense emotions when working with their employees and stakeholders. D'Intino et al. (2007) defined the ability to regulate emotions as the main characteristic of entrepreneurs' emotional intelligence, and they proposed a positive interaction with self-leadership, that is, the ability of entrepreneurs to regulate their own behaviour. While the ability to regulate emotions is generally attributed to entrepreneurs more than to employees in other professions, D'Intino et al. (2007) also pointed out the fact that this ability is something that can be learned and developed. Similarly, Pathak and Goltz (2021) proposed a conceptual model which highlights that emotional intelligence as an ability will help in selecting and shaping the appropriate coping process with negative emotions.

Emotional intelligence scholars have defined emotional intelligence and its subdimension of regulating emotions not only as an ability, but also as a trait ($n = 3$), reflecting the idea of emotional intelligence as emotional self-perceptions and a part of personal characteristics (Torres-Coronas & Vidal-Blasco, 2017). For example, Ahmetoglu et al. (2011) demonstrated that emotional intelligence as a trait has a positive influence on entrepreneurial activity and entrepreneurial achievement, while Torres-Coronas and Vidal-

Blasco (2017) showed that regulating emotions as part of emotional intelligence positively influences entrepreneurs' proactive networking behaviour.

In summary and across the board, scholars see emotional intelligence as an ability or a trait as positive—or at least not harmful—for entrepreneurs and their endeavours. However, it remains unclear whether there are certain entrepreneurial behavioural strategies that can be characterised as being more or less emotionally intelligent, and how entrepreneurial intelligence relates to using certain strategies to manage situations in which negative emotions occur. We will elaborate further on this research void in the future research avenues.

2.4.2 Entrepreneurial emotion regulation

17 studies in this review focused on emotion regulation, and conceptualised it as an entrepreneurial ability, a trait, or as strategies. The ability perspective is represented in three studies that stem from the emotion regulation tradition. For instance, Huy and Zott (2019) theorised that the ability of regulating both own (e.g., by focusing on long-term success) and others' emotions (e.g., by showing consideration) is an essential part of entrepreneurs' dynamic managerial capabilities.

Scholars also explored emotion regulation from a trait perspective ($n = 6$). In contrast to emotional intelligence, those studies typically distinguish between subtypes of regulating emotions based on the terminology introduced by Gross (1998), who differentiated between the suppression or reappraisal of emotions. Several studies showed that the suppression or reappraisal of emotions has distinct outcomes on behavioural outcomes: Team members in entrepreneurial firms who regularly suppress their emotions were perceived less as leaders than individuals who reappraise their emotions (Sirén et al., 2020). At the same time, De Cock et al. (2020) found that both reappraisal and suppression of emotions are negatively related with venture success, implicating that the regulation of emotions should generally be

avoided, which contradicts previous research that highlighted the positive role of emotion regulation.

Other studies use the emotion regulation terminology initially stemming from research on emotional labour—that is, the distinction between deep and surface acting (Grandey, 2000; Hochschild, 1983). For example, Batchelor et al. (2018) demonstrated that both strategies of regulating and thereby disguising emotions are harmful for observers, and they plead for entrepreneurial leaders to show their genuine, natural emotions in order to achieve favourable employee attitudes.

Comparatively few authors explored specific mechanisms that go beyond the reappraisal-suppression or deep acting-surface acting differentiation. Two studies conducted their research using concepts that differ from traditional conceptualisations: Stroe et al. (2020) propose that affect can be regulated by *other* emotions, in this case, the type and level of passion regulated the fear of failure. Another study by Hatak and Snellman (2017) investigated emotion regulation with regard to the specific emotion of regret, and their findings showed that the anticipation of regret can serve as a regulation mechanism for nascent entrepreneurial activities.

Studies examining emotion regulation as situation-specific strategies ($n = 8$) employ varying conceptualisations. Using more popular operationalisations of emotional labour and emotion regulation, Burch et al. (2013) conceptually investigated the role of deep acting and surface acting on general entrepreneurial well-being and performance outcomes, while Ramli et al. (2022) showed with interview data that entrepreneurs used more deep and surface acting in a crisis situation. Ivanova et al. (2022) specifically explored the role of emotion suppression as part of emotion regulation in new venture teams, which showed to be a negative way of regulating emotions for relationship viability. Similarly focusing on the interpersonal level, Brooks et al. (2019) conceptualised revealing failure as an interpersonal

emotion regulation strategy and showed that it weakens observers' envy in an entrepreneurial pitch situation. Another quantitative study by Li et al. (2021) defined emotion regulation as an interpersonal strategy of supervisors that was operationalised as "positive" behaviours (e.g., spending time with subordinates), which in turn increased entrepreneurial performance.

Two studies examined the role of humour as a strategy: While Hwang and Choi (2021) showed that the use of humour by entrepreneurs who experienced failure motivated re-entry into entrepreneurial endeavours, Hmieleski and Cole (2022) found a positive influence of using humour as a strategy to deal with uncertainty on firm performance.

Taking a conceptual view on emotion regulation as a situation-specific strategy after failure, Shepherd (2003) and Shepherd et al. (2009) highlighted the need for individuals' regulation of grief (i.e., by taking a loss and restoration orientation in their grief recovery, or by anticipating grief) to enhance their level of learning from failure. Similarly, He et al. (2018) showed that the ability to regulate emotions positively influences learning behaviours after failure, especially when failure velocity is high.

2.4.3 Entrepreneurial emotion-focused coping

Studies in this review that focused on entrepreneurial emotion-focused coping encompass 19 studies that either used a trait or a strategy perspective. Studies in the emotion-focused coping domain typically differentiate between more specific forms of emotion-focused coping, which is a much more diversified way to look at the entrepreneurial emotion management process than it is done in the emotional intelligence domain, where most studies just focus on a broad conceptualisation of managing emotions, without specifying certain techniques. Also, other than in the emotion regulation domain, scholars typically do not put emphasis on an upregulation focus on emotions, but rather propose different mechanisms: For instance, regarding emotion-focused coping strategies that entrepreneurs employ as a trait ($n = 7$), studies showed that different mechanisms like avoidance, minimisation, and distancing

oneself from the problem lead to higher well-being (Drnovsek et al., 2010), while emotion-focused coping proved also to be beneficial for decreasing negative affect (Patzelt & Shepherd, 2011). Nikolaev et al. (2020), on the other hand, argued that emotion-focused coping is a rather harmful coping technique and empirically demonstrated that entrepreneurs generally use more problem- than emotion-focused coping, which in turn led to higher well-being than that of traditional employees. This view on the management of emotions is, hence, diametrically different from studies on emotional intelligence and emotion regulation that, in contrast, attribute a significant importance to the existence and use of emotion management in the entrepreneurial context. While both views may have their merits, this can be seen as an indication that the pure focus on the management of entrepreneurial emotions, as conceptualised in the emotional intelligence and emotion regulation literature, may have its limitations when it is not interpreted in light of the *practical* challenges and problems that arise in the entrepreneurial context. While the focus on managing emotions may help in overcoming challenges, the focus on practical problems—that in turn evoke emotions—and the aim to solve them, should, at the same time, not be neglected.

Twelve studies explored coping as situation-specific strategies. Engel et al. (2021) investigated entrepreneurs' fear of failure and demonstrated that meditating entrepreneurs enhanced their self-compassion as an emotion-focused coping strategy, which reduced their fear of failure. Focusing on the time after failure, one study showed that appraisals of loss had a positive influence on felt grief after failure (Jenkins et al., 2014). Another qualitative study revealed that emotion-focused coping strategies (i.e., venting, using emotional support) had a positive influence on the release of stress levels (Eager et al., 2019), and Singh et al. (2007) found that entrepreneurs use emotion-focused strategies after failure (i.e., reframing and re-examination), which led to psychological learning in terms of entrepreneurs' self-knowledge.

These studies demonstrate, contrary to the conceptualisation of emotion-focused coping as a trait by Nikolaev et al. (2020), that emotion-focused coping strategies can have positive outcomes in certain situations. An explanation for the differences could be the operationalisation of emotion-focused coping. While Nikolaev et al. (2020) described the trait of emotion-focused coping as an avoidance strategy (meaning that entrepreneurs do not actively engage in managing emotions), studies that analysed emotion-focused coping from a non-habitual strategy perspective, described emotion-focused coping as self-compassion (Engel et al., 2021) or as appraisals (Jenkins et al., 2014). While the latter two strategies imply a rather active way of managing emotions, the avoidance of emotions is a rather passive way of dealing with them, which can hence be seen as a less beneficial way of managing emotions.

2.5 Contextual factors of entrepreneurial emotion management

Besides the different perspectives of entrepreneurial emotion management, the framework in Figure 2 also highlights contextual factors, including macro- and meso-level factors, individual factors, antecedents, and consequences. These contextual factors determine the entrepreneurial emotion management process, as entrepreneurs' experiences are embedded within a complex web of environmental, organisational, and individual factors, that also lead to a variety of potential antecedents and consequences of entrepreneurial emotion management.

Within each research tradition of entrepreneurial emotion management, including emotional intelligence, emotion regulation, and emotion-focused coping, scholars have explored contextual factors with varying frequency. **Table 2-2** offers a comprehensive summary, showing the frequency with which these contextual factors were investigated across each entrepreneurial emotion management concept.

Table 2-2: Emotion management concepts in relation to contextual factors

	<div>Emotion management concepts</div> <div>Contextual factors and emotion management perspectives</div>	Emotional intelligence	Emotion regulation	Emotion-focused coping	Total number of articles
Entrepreneurial emotion management perspectives	Individual ability	17	3	0	20
	Trait	3	6	7	16
	Situation-specific strategies	0	8	12	20
Macro- and meso-level factors	Environmental conditions	5	4	7	16
	Organisational predispositions	4	7	7	18
	Organisational phase	4	14	12	30
Individual factors	Intrapersonal perspective	10	9	15	34
	Interpersonal perspective	9	8	3	20
	Individual predispositions	12	11	15	38
	Relational predispositions	3	4	3	10
Antecedents	Entrepreneurial events	7	10	15	32
	Managed emotions	7	10	16	33
Consequences	Individual outcomes	14	13	16	43
	Venture outcomes	6	7	3	16

Note. This table displays the count of articles incorporating entrepreneurial emotion management concepts (i.e., emotional intelligence, emotion regulation, and emotion-focused coping), and shows how many of these articles relate to the contextual factors and emotion management perspectives (i.e., individual ability, trait, situation-specific strategies), identified as second-order themes in this review. Total numbers of articles are not mutually exclusive.

2.5.1 Macro- and meso-level factors

Entrepreneurs operate under extraordinary circumstances, involving macro- and meso-level factors, which influence the emotion management process (see the top of **Figure 2-2** and left column of **Table 2-2**). As a macro-level factor, *environmental conditions* ($n = 16$) encompass the culture or geographic area entrepreneurs operate in.

For example, Miao et al. (2018) conducted a meta-analysis that revealed a particularly strong positive link between emotional intelligence and entrepreneurial intentions in cultures oriented towards long-term objectives, which is because individuals in such cultures are more inclined to focus on long-term goals, a characteristic often associated with entrepreneurial ventures. Environmental conditions were also investigated by Schlaegel et al. (2021), who explored environmental conditions by comparing the emotional intelligence levels between entrepreneurs and non-entrepreneurs. Their findings showed significant differences in a German entrepreneurial sample, unlike in the U.S. and Russian samples, indicating the influence of environmental conditions on the capacity to manage emotions within entrepreneurial contexts.

Focusing more narrowly on meso-level factors, specifically on *organisational predispositions* ($n = 18$), Drnovsek et al. (2010) demonstrated that a venture's capital positively predicts entrepreneurs' preference for emotion-focused coping over problem-focused coping. Conversely, De Cock et al. (2020) found that a venture's overall performance affects whether entrepreneurs' use of emotion regulation strategies decreases the likelihood of venture survival.

Meso-level factors also encompass various *organisational phases* ($n = 30$), including the initial founding phase, the growth phase, and potentially, the phase of failure. 24 studies, however, especially in the emotional intelligence domain, did not specify the organisational phase they are studying. In total, 13 studies broadly examined the impact of entrepreneurial

emotion management on categories of entrepreneurial behaviour and performance outcomes, such as success, or health outcomes, like wellbeing (Burch et al., 2013; Drnovsek et al., 2010; Nikolaev et al., 2020) in a general growth phase. A smaller set of just five studies delved into the nuances of the founding stage, investigating aspects such as the role of regret regulation in nascent entrepreneurial activities (Hatak & Snellman, 2017) and the impact of emotional intelligence on venture goal commitment (Treffers et al., 2018). Furthermore, twelve studies shed light on the significance of entrepreneurial emotion management post-failure, focusing on themes like learning from failure (Shepherd et al., 2009; Wei et al., 2019) and re-starting a new venture (Hwang & Choi, 2021; Kauppinen et al., 2019).

In sum, the analysis, as also depicted in **Table 2-2**, reveals a common trend among scholars across all three research traditions to treat entrepreneurs and their firms as a relatively homogeneous group, often overlooking the nuances of specific environmental conditions, organisational predispositions, and organisational phases. This approach limits a comprehensive exploration of the varied experiences of entrepreneurs in managing emotions. Our discussion on future research directions aims to bridge this gap by highlighting areas in need of further investigation.

2.5.2 Individual factors

Research on entrepreneurial emotion management divides into intrapersonal and interpersonal perspectives. Overall, as indicated in **Table 2-2**, the intrapersonal perspective is more prominent than the interpersonal perspective. This is especially the case within the emotion-focused coping realm, where scholars mostly adopt an intrapersonal view, focusing on the individual entrepreneur, while only three studies took an interpersonal perspective. In comparison, in the emotion intelligence ($n = 9$) and emotion regulation ($n = 8$) domain, the interpersonal perspective is more prominent.

The *intrapersonal* perspective, explored in 34 studies, examines how entrepreneurs internally manage their emotions (Madrid et al., 2019). This includes exploring the impact of emotional intelligence on entrepreneurial success (Ahmetoglu et al., 2011), and how emotion regulation and coping strategies contribute to well-being and learning from failure (He et al., 2018; Nikolaev et al., 2020).

Conversely, the *interpersonal* perspective, covered in 20 studies, investigates how entrepreneurs manage their own or others' emotions during interactions, for instance in teams (Hmieleski & Cole, 2022; Ivanova et al., 2022), with external stakeholders (Burch et al., 2013), or with subordinates (Sirén et al., 2020; Yin et al., 2020). This perspective acknowledges that entrepreneurship impacts not only the founders but also their employees, who share the venture's inherent uncertainties and emotional challenges (Andersén, 2017), as well as that entrepreneurs most of the time work together with other stakeholders. However, the literature—especially in the emotional intelligence domain—often lacks specificity regarding whose emotions (e.g., those of team members, subordinates, investors) are being managed, broadly categorising them as “others”. This presents a gap in understanding the targeted individuals of emotion management, a topic we will revisit in the future research avenues.

The interpersonal perspective extends to managing emotions in front of others, including suppressing negative emotions during challenges (Ivanova et al., 2022), or influencing others' emotions to motivate them (Huy and Zott, 2019; Cole et al., 2018). The display of emotions can lead to the contagion of emotions, impacting observers' attitudes and behaviours (Barsade, 2002). A key consideration here is the authenticity of such emotional displays, as genuine emotion management can foster positive outcomes like trust and engagement, while inauthentic displays may have negative repercussions (Batchelor et al., 2018; Burch et al., 2013). Despite its prominence in organisational behaviour research on

inauthentic emotion management strategies, surprisingly, this area remains largely unexplored empirically within entrepreneurial research, which represents a significant opportunity for future investigation.

Distinguishing between intrapersonal and interpersonal perspectives also allows for the examination of individual ($n = 38$) and relational ($n = 10$) predispositions. Individual predispositions encompass entrepreneurial abilities (Ahmetoglu et al., 2011), resilience (Corner et al., 2017), optimism (Engel et al., 2021), or general mental ability (Allen et al., 2020), which are related to emotion management ability. Another factor on the individual level is an entrepreneurs' perceived role centrality, which has been shown to positively influence the use of emotion-based coping rather than problem-focused coping (Drnovsek et al., 2010). One noteworthy study explicitly highlighted the role of the entrepreneur's gender and showed that emotional intelligence can help women deal with the stereotype threat they may face when founding (Zhang et al., 2022). Relational predispositions, on the other hand, include factors such as team efficacy (Hmieleski & Cole, 2022) and team passion (Yin et al., 2020), that have been shown to positively influence the entrepreneurial emotion management process. However, despite these existing insights, research on relational predispositions remains limited, highlighting a critical gap given the collaborative nature of entrepreneurship.

2.5.3 Antecedents

Entrepreneurs experience multiple events at work—with either short- or long-term implications. These range from everyday situations, like navigating challenges (Drnovsek et al., 2010) and dealing with stress (Thompson et al., 2020), to managing interpersonal conflicts (Schonfeld & Mazzola, 2015; Yin et al., 2020). Much of the existing research, however, delves into more critical incidents within the entrepreneurial journey, including business failures or crises (He et al., 2018; Hwang & Choi, 2021; Jenkins et al., 2014; Ramli et al., 2022; Shepherd et al., 2009). Specifically, the COVID-19 pandemic has brought forth novel

work on emotionally laden events in the entrepreneurial context. For example, Ramli et al. (2022) found that entrepreneurs conducted more emotional labour during the pandemic to lead their employees through the crisis. As it can be seen in **Table 2-2**, it is striking that scholars from the emotion regulation and emotion-focussed coping research traditions in particular define which events they focus on, while emotional intelligence scholars often leave open which situations of the entrepreneurial experience they aim to investigate.

As depicted in **Figure 2-2**, these events elicit emotional responses that can significantly impact work attitudes and behaviours (Gross, 2015; Weiss & Cropanzano, 1996). As indicated in **Table 2-2**, 33 studies in total have specified the discrete emotion they are studying. While 20 studies explored emotions ranging from fear of failure, anxiety, regret, sadness, grief, anger, frustration, to envy, there is a notable gap in the differentiation of these emotions in the literature, as 13 studies only referred to negative or stressful emotions, and 21 studies did not specify at all whether they were examining negative, positive, or even more nuanced emotional states.

As depicted in **Table 2-2**, a general approach to studying emotions is particularly prevalent in research on emotional intelligence and emotion regulation, with only 7 (emotional intelligence) and 10 (emotion regulation) studies focusing on discrete emotions. Other scholars from these traditions state, albeit often only implicitly, that they are interested in the process of managing emotions that are undesirable or disruptive to the entrepreneurial process (Burch et al., 2013; Drnovsek et al., 2010), which implicates that negative emotions are of interest in their studies—however, they do not further differentiate them. An exception lies within the domain of emotion-focused coping, where specific emotions like grief (Corner et al., 2017; Jenkins et al., 2014; Kauppinen et al., 2019; Shepherd, 2003) or fear (Engel et al., 2021; Hwang & Choi, 2021; Stroe et al., 2020) are studied in a total of 16 articles.

With regard to *positive* emotions, we already know from other work contexts (e.g., police officers) that it is theoretically and practically possible to manage (i.e., to downregulate) positive emotions (Gross, 2015). Although there is no example of positive entrepreneurial emotion management in this systematic integrative review, a potential use case for research in the entrepreneurial context could be that entrepreneurs manage their positive emotions to appear more serious in negotiations—which could be explored from both an ability and a strategy perspective. We will discuss this further in the future research avenues.

2.5.4 Consequences

Finally, the consequences of entrepreneurial emotion management can be differentiated by *individual* ($n = 43$) and *venture* ($n = 16$) *outcomes*. At the individual level, research has explored a broad spectrum of outcomes, ranging from effects on personal attitudes, behaviours, and well-being to intentions for future entrepreneurial engagement. Within the emotional intelligence domain, studies have predominantly focused on its influence on broader aspects like perceived entrepreneurial success (Allen et al., 2020; Chirania & Dhal, 2018; Zhou & Bojica, 2017) and entrepreneurial performance and achievements (Ahmetoglu et al., 2011). Conversely, research through the lens of emotion-focused coping has mainly delved into psychological impacts, including personal well-being (Drnovsek et al., 2010; Nikolaev et al., 2020) and stress reduction (Eager et al., 2019; Schonfeld & Mazzola, 2015). Emotion regulation studies have examined a range of outcomes, from emotional and attitudinal changes to behavioural shifts like learning from failures (He et al., 2018; Shepherd, 2003; Shepherd & Cardon, 2009; Wei et al., 2019), and improving entrepreneurial performance (Li et al., 2021). Interestingly, only four studies specifically addressed changes in emotions as a result of entrepreneurial emotion management (Brooks et al., 2019; Jenkins et al., 2014; Patzelt & Shepherd, 2011; Stroe et al., 2020), suggesting an

opportunity for further research to first investigate emotional changes and then assess subsequent attitudinal or behavioural adjustments (Weiss & Cropanzano, 1996).

Research on outcomes at the venture level is much more limited, which is, as depicted in **Table 2-2**, evident across all research traditions. Extant research has looked at outcomes such as team collaboration (Cole et al., 2018), venture survival (De Cock et al., 2020), leader emergence (Sirén et al., 2020), and team innovation performance (Yin et al., 2020). These studies highlight the broader impact of entrepreneurial emotion management, suggesting that an entrepreneur's ability to manage emotions can influence the success of their team and venture. The underlying assumption is that entrepreneurial emotion management directly or indirectly (through mechanisms like interpersonal processes) affects performance and success (Ingram et al., 2019).

Across all research traditions—emotional intelligence, emotion regulation, and emotion-focused coping—scholars place emphasis on the positive impact of effective emotion management. De Cock et al. (2020) provided a notable exception, indicating that habitual emotion regulation strategies, such as suppression and reappraisal, reduce the likelihood of venture survival. This finding introduces a critical perspective on the potential drawbacks of entrepreneurial emotion management, warranting further exploration in this area.

2.6 Future research avenues

As the systematic integrative review of current literature on entrepreneurial emotion management has illustrated, there are still unanswered questions both within *emotion management perspectives* and their interconnections as well as the varied attention given to *contextual factors*. Notably, the frequency with which these contextual factors are investigated across the different emotion management concepts reveals significant disparities. Based on the insights from **Table 2-2** and the preceding discussion, we have identified areas that are under-researched and in need of further investigation.

2.6.1 Research avenue #1: Entrepreneurial emotion management perspectives

Integrating studies on emotion management, including those focused on emotional intelligence, emotion regulation, and emotion-focused coping, allows us to examine entrepreneurial emotion management from various perspectives: as an entrepreneur's individual ability, a trait, or situation-specific strategies. We have identified research gaps within each of these perspectives, as well as in their interrelationships.

Regarding the ability perspective, emotion management has been highlighted as particularly crucial and beneficial for entrepreneurs (Cross & Travaglione, 2003; Humphrey, 2013). However, it is important to note that most studies in this review relied on self-report measures to assess entrepreneurial emotion management ability (Miao et al., 2018). However, a recent study suggested that entrepreneurs may sometimes overestimate their abilities, which can skew their judgments (Singh, 2020). This overestimation could also impact their self-assessment of emotion management ability. Thus, incorporating objective measures, such as evaluations by team members, could provide a clearer understanding of the ability perspective and its relationship to entrepreneurial success.

Our review also indicates a lack of empirical evidence on the effectiveness of situation-specific strategies. While the importance of identifying appropriate strategies for entrepreneurs has been recognised in qualitative and conceptual studies, only seven studies have examined specific strategies and their efficacy quantitatively. This gap is significant because the use and impact of entrepreneurial emotion management strategies are likely to vary. Research in the broader organisational context has shown that individuals employ a variety of strategies in specific situations (Scott et al., 2012). This variability is particularly pertinent in the unpredictable entrepreneurial environment, where entrepreneurs must continually adapt to new circumstances without standard procedures (Baron, 2008).

Our review also highlights a significant knowledge gap regarding the interplay between these perspectives, especially the impact of emotion management ability on the choice of specific strategies. This limitation is apparent not only in the entrepreneurial sphere but also in the broader organisational domain (Megías-Robles et al., 2019). Initial efforts in the organisational literature have already started to bridge emotional intelligence and emotion management, conceptualising emotional intelligence as a potential influencing factor in adopting more effective emotion management strategies, such as preferring authentic over inauthentic strategies (Gabriel et al., 2023; Grandey & Melloy, 2017). Therefore, future research should investigate the implications of general emotion management ability for entrepreneurial behaviour, specifically whether it predicts the use of certain trait-level or situation-specific strategies (e.g., on the daily level), and, in turn, which strategies reflect a high emotion management ability. Additionally, it would be beneficial for theoretical advancement to explore whether entrepreneurs learn from employing various strategies and how this learning affects their emotion management ability in the long term (O'Shea et al., 2017).

2.6.2 Research avenue #2: Macro- and meso-level factors

As we have shown in this review, previous research has already revealed that different macro- and meso-level factors influence entrepreneurial emotion management. However, as also displayed in **Table 2-2**, only 16 articles shed light on environmental conditions, and 18 articles specified organisational predispositions as contextual factors potentially influencing entrepreneurial emotion management. At the same time, the studied variables remain at a rather general level. While environmental conditions predominantly include cultural or geographical variables, organisational predispositions encompass very general variables, such as the firm's age, capital or performance (De Cock et al., 2020; Drnovsek et al., 2010). Future research could therefore focus on influencing factors that are associated more directly with

outcomes on emotional experiences. As one crucial influencing factor, the culture or geographic areas entrepreneurs operate in were defined (Lin et al., 2018; Miao et al., 2018; Schlaegel et al., 2021). Culture, however, could also be explored at the venture level as an organisational predisposition. For example, an emotion-oriented firm culture could foster the engagement in different emotion management strategies, or the ability of ventures' members to manage their emotions. Burch et al. (2013) assume that, in the entrepreneurial context, display rules of emotions might prescribe the expression of genuine emotions rather than the upregulation of emotions as the "cultural" norm in traditional organisational contexts. This assumption remains underexplored in the entrepreneurial context, and the investigation of appropriate emotional displays would be a fruitful path for future research.

Furthermore, research could explore more specific organisational phases to identify the significance and the peculiarities of entrepreneurial emotion management in those phases, a void that is particularly evident in the emotional intelligence domain. Extant literature that is part of this review either focused on a general growth phase ($n = 13$), did not define the certain organisational phase at all ($n = 24$), or focused on the time after failure ($n = 12$). However, it is an important future research avenue to specifically investigate the time during founding and nascent venture development, which was studied in only five articles so far. Those times may be especially challenging or stressful for entrepreneurs with potential events that could evoke negative emotions—for example, project setbacks which could influence team dynamics in the formation of teams or the initiation of business with new customers, investors, and partners. Research in the context of nascent venture formation could hence examine how entrepreneurs can best deal with these challenges with the support of emotion management, and how entrepreneurs can use their emotional knowledge and acquired abilities for later stages of their entrepreneurial endeavours.

2.6.3 Research avenue #3: Individual factors

In this review, and as visualised in **Table 2-2**, we show that extant research distinguishes between an intrapersonal ($n = 34$) and an interpersonal ($n = 20$) approach to entrepreneurial emotion management, and that the latter received less attention so far (De Cock et al., 2020; Madrid et al., 2019). To date, studies in entrepreneurship, especially those employing quantitative methods, have largely concentrated on the intrapersonal perspective, often under the “lone founder” narrative (Cooney, 2005). Yet, the way entrepreneurs manage emotions not only affects them but also impacts the behaviour of venture members, which is crucial for a venture’s performance and survival (De Cock et al., 2020).

Scholars in the wider organisational field have already recognised the need to explore the interpersonal aspects of emotion management, noting its significance in fostering positive work relationships (Troth et al., 2018). Within the entrepreneurial sphere, the interpersonal aspect has been mainly examined through the lens of emotional intelligence ($n = 9$) so far, examining the general ability to manage others’ emotions (Miao et al., 2018). However, it still remains to be determined if emotion management ability yields positive effects for employees and other stakeholders beyond the entrepreneurs themselves, as extant studies mostly did not specify the stakeholders they are interacting with, and did not focus on how emotion management contributes to these interactions and potential relational outcomes. This gap is pivotal, as entrepreneurs interact with a variety of stakeholders, including employees, investors, and customers, and understanding how and when emotion management ability contributes to constructive, lasting relationships is essential (Burch et al., 2013).

The exploration of interpersonal emotion management strategies, whether as a trait or through situation-specific strategies, is also still emerging. It is clear that displayed emotions affect others (Barsade, 2002), such as team members, or external stakeholders, such as investors (Burch et al., 2013). Investigating how managing emotions like passion or anxiety in

interactions with team members or investors might influence relational dynamics, potentially fostering trust or causing rejection, presents a compelling research opportunity. This could be especially interesting with regard to leadership behaviour, as entrepreneurial leaders play a key role in setting emotional norms and behaviours for themselves and their teams (Batchelor et al., 2018; M. D. Ensley et al., 2006). For example, research could further examine how entrepreneurial leaders can model emotional behaviour to guide their teams. By proactively considering entrepreneurial emotion management as a key resource for success, there is potential to better prepare employees for emotionally charged situations, reducing reliance on detrimental strategies like emotion suppression or inauthentic displays (Burch et al., 2013; Ivanova et al., 2022). Furthermore, a closer examination of the *interrelationship* between intra- and interpersonal perspectives could lead to a more holistic understanding. For example, dyadic studies could be conducted to examine various stakeholders' perspectives (e.g., a venture's leader and subordinate experiences) to gain more insights into the role of emotion management for relational consequences.

2.6.4 Research avenue #4: Antecedents

The antecedents of entrepreneurial emotion management encompass both triggering events and the resultant emotions. As depicted in **Table 2-2**, a significant portion of the literature ($n = 32$) identified events that necessitate emotion management, with a remarkable exception of studies from the emotional intelligence domain ($n = 7$). The focus on concrete events is crucial since the effectiveness of certain strategies and the importance of emotion management ability may vary based on the emotional intensity or personal relevance of the events, and on whether emotions are managed internally or during interactions with others (e.g., managing anger resulting from a project setback might differ when entrepreneurs are alone compared to when they are with others).

However, similar to the exploration of macro- and meso-level factors, research on specific events remains nascent, often addressing broadly defined events (e.g., generalised obstacles). Future research could thus broaden the range of events examined and include a temporal dimension. Not all emotion management strategies are appropriate in every context. For instance, while suppressing anger might be effective in the short term, like when trying to meet a deadline, it could be harmful to long-term well-being (Gabriel et al., 2023).

Communication mode emerges as another situational factor worth investigating. The growing trend of entrepreneurs communicating with their employees and investors via digital channels opens new avenues for research. This shift towards digital communication, as also recently suggested by Gabriel et al. (2023), introduces fresh queries into emotion management studies, such as the ways interpersonal emotion management can enhance investor relations in a predominantly digital environment, and how the dynamics of emotion management might differ in founder teams that collaborate mainly online.

With regard to investigated emotions, 34 studies in this review have identified the emotions being managed, but 13 of them have focused on “negative” emotions without distinguishing among specific emotions. 21 studies have not defined the targeted emotions at all. Given that emotions can have different meanings across situations (Ashkanasy & Dorris, 2017; George & Zhou, 2002), future research could delve deeper into the management of distinct emotions like fear, anger, or irritation, which might uncover nuances in the experience and effective management of various negative emotions. Additionally, managing positive emotions, which is theoretically feasible (Gross, 2015) could also be pertinent in the entrepreneurial setting. There may be circumstances where it is advantageous for entrepreneurs to down-regulate positive emotions, especially when a more rational and analytical approach is required. Existing research has indicated that even passionate emotions can be detrimental (de Mol et al., 2020), suggesting an area of exploration into whether

entrepreneurs might benefit from moderating their passion in situations that demand a more reasoned response.

2.6.5 Research avenue #5: Consequences

Regarding the consequences of entrepreneurial emotion management, research has predominantly focused on outcomes at the individual rather than the venture level, as evidenced in **Table 2-2**. While this is not surprising, given the psychological nature of emotion management, existing studies on outcomes at the venture level have yielded intriguing findings, demonstrating that emotion management is not solely crucial for individuals but also carries significant implications for the long-term economic success of entrepreneurial businesses. Therefore, it is vital for future research to incorporate this venture-level perspective into their studies. Given the critical reliance of entrepreneurial ventures on innovation (Williamson et al., 2022), one possible research direction would be to examine how the extent of emotion management ability of leaders or within (founding) teams and the effective use of emotion management strategies can predict the innovativeness of a venture.

With regard to the individual level, this review reveals that the majority of existing research on entrepreneurial emotion management has examined very broad individual outcomes, consistently across all research traditions, with a focus mainly on cross-sectional and trait-level analyses of potential consequences. Three key points emerge from this observation:

First, many studies overlook the emotional mechanisms at play when assessing consequences. Surprisingly, research has only sporadically considered changes in experienced emotions as a potential consequence of entrepreneurial emotion management ($n = 4$). This gap in the literature is significant, as changes in emotions can predispose attitudes and behavioural outcomes (Weiss & Cropanzano, 1996). Experimental methods could offer valuable insights into the relationship between emotions, entrepreneurial emotion management, and their

attitudinal and behavioural effects by examining the changes in emotions as the foundational mechanism linking emotion management and its consequences.

Second, given that emotion management is a daily occurrence, with likely variations in intensity and chosen strategies, an important area for future investigation is the daily consequences of entrepreneurs' emotion management. Although exploring "extreme" events appears apt for the entrepreneurial setting, entrepreneurs encounter challenging and emotional situations daily. Research into how emotion management by entrepreneurs affects daily behaviours, such as creativity, proactive work behaviour, or well-being, or relationships with others (e.g., leader-subordinate relationships) would provide fruitful insights.

Third, the majority of research highlights the positive outcomes for entrepreneurs and their firms. Beyond studies rooted in the coping tradition, which suggest that problem-focused approaches are generally more advantageous than emotion-focused strategies (Nikolaev et al., 2020), the domains of emotion regulation and emotional intelligence predominantly view emotion management as beneficial for entrepreneurs. Nevertheless, research in other organisational contexts has also illuminated the potential drawbacks of emotion management, such as the risk of health impairment due to strenuous emotion management efforts (Grandey & Melloy, 2017), a factor that could be crucial for entrepreneurial success or failure. This aspect has yet to be thoroughly explored in the entrepreneurship domain (O'Shea et al., 2017). Another consideration is the authenticity, or lack thereof, of displayed emotions that do not align with an individual's genuine feelings (Batchelor et al., 2018), and could lead to mistrust among observers (Grandey & Melloy, 2017). For example, expressing anger during project challenges could elicit negative responses from the team, whereas concealing anger might only be advantageous if done authentically—which, in turn, is dependent on the individual's emotion management ability. In sum, the entrepreneurial setting offers numerous

opportunities to investigate the consequences of emotion management and to offer a more balanced perspective on the advantages and disadvantages of emotion management.

2.7 Conclusion

Against the background of the multitude of potential emotional events in the entrepreneurial context, understanding both theoretically and practically how entrepreneurs can respond to unwelcome emotions to attain their entrepreneurial activities is a high research priority (Frese & Gielnik, 2023). At the same time, by applying different concepts, the literature on entrepreneurial emotion management remains fragmented. By integrating the research streams on emotional intelligence, emotion regulation, and emotion-focused coping, we provided a comprehensive picture of existing research on emotion management in the entrepreneurial context.

As the examination of the identified themes— entrepreneurial emotion management perspectives, macro- and meso-level factors, individual factors, antecedents, and consequences—has shown, the research traditions share some commonalities in their research approaches, but also differ in whether they view the contextual factors of entrepreneurial emotion management as general dimensions or from more specific and diverse perspectives, which in turn calls for further research.

First, as we have shown in this review, the three research streams emotional intelligence, emotion regulation, and emotion-focused coping adopt different perspectives when considering entrepreneurial emotion management from an ability, trait, or a strategy perspective. While emotional intelligence is conceptualised as an entrepreneurial ability or trait, emotion regulation is examined from all three perspectives, and emotion-focused coping is studied as a trait or a strategy. However, our knowledge is still limited in terms of quantitative evidence regarding beneficial strategies used to manage emotions as well as the interrelationship between the three perspectives.

Second, our systematic integrative review has shown that scholars in all three research traditions treat entrepreneurs (and their firms) mainly as a homogeneous mass in terms of the macro- and meso-level factors studied, without delving deeper into the specific environmental conditions, organisational predispositions, and organisational phases.

Third, with regard to the individual factors, there are already attempts to examine entrepreneurial emotion management not only from an intrapersonal, but also from an interpersonal perspective, particularly in the research areas of emotional intelligence and emotion regulation. However, there are only few studies that have empirically measured and tested the interpersonal lens from both ability and strategy perspectives, and which specified whose emotions are being managed.

Fourth, with respect to the antecedents of entrepreneurial emotion management, research traditions differ in whether they examine specific emotions (e.g., fear) managed during particular entrepreneurial events (e.g., failure) or whether they leave the analysis at a more general level. In particular, scholars from the emotional intelligence tradition tend to examine broadly defined emotions and often do not specify situational contexts, whereas both the emotion regulation and emotion-focused coping traditions are more specific about which emotions are examined and during which specific events. However, there is still room for more detailed considerations of various discrete emotions that occur in the entrepreneurial life.

Fifth, our review has shown that all three examined research traditions tend to look at broad consequences of entrepreneurial emotion management. We have identified that while individual-level outcomes of emotion management have received considerable attention, venture-level outcomes are less explored, yet hold significant potential for understanding the broader impact on entrepreneurial success. With regard to individual outcomes, our review underscored the importance of daily emotion management practices and their influence on

key entrepreneurial outcomes such as creativity, and highlighted the necessity of balancing the beneficial aspects of emotion management with its potential drawbacks, such as the risks associated with inauthentic emotional displays and the physical and psychological costs of continuous emotion management (Gabriel et al., 2023).

In conclusion, this systematic integrative review has illuminated the multifaceted landscape of entrepreneurial emotion management. In advancing this field, it is imperative that researchers and practitioners alike recognise the pivotal role of emotion management in entrepreneurship and its contextual factors, as it not only influences the well-being and performance of individuals, but also shapes the success of entrepreneurial ventures.

3. Employee reactions to leader emotional display strategies in a crisis situation² (Essay II)

Abstract

During a crisis, leaders experiencing fear have to decide whether to reveal or regulate their emotions. Drawing on the emotions as social information (EASI) model and employing an experimental vignette study (n = 159) in the context of a young firm's crisis, we compare employee reactions (i.e., employee affect, job engagement, and affective commitment) to different leader emotional display strategies, namely, deep acting, surface acting, and genuine emotions. Compared with a leader's genuine emotions (i.e., display of fear), surface acting increased negative affect, whereas deep acting reduced negative affect. With regard to the total effects of our mediation model, surface acting negatively influenced employee job engagement and affective commitment, whereas deep acting surprisingly showed no differences to the display of genuine emotions. Our findings indicate that leaders who experience fear may consider revealing this genuine emotion during a crisis rather than engaging in potentially inauthentic emotion regulation strategies.

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- *81st Annual Meeting of the Academy of Management (AOM)*, virtual, July 29-August 4, 2021.

3.1 Introduction

In times of crisis, employees look to their leaders for guidance and direction, which makes appropriate leader behavior particularly crucial (Madera & Smith, 2009; Slaughter et al., 2021). Against the background of economic crises, such as the COVID-19 pandemic, which particularly put nonestablished firms in difficult positions (Kuckertz et al., 2020), leaders find themselves in the position of having to lead their employees despite their own challenging situations (Humphrey et al., 2008). Even though leaders of young firms are often characterized as being optimistic in uncertain situations (Hmieleski & Baron, 2009), individual reactions to crises vary (De Clercq & Pereira, 2022), and leaders are not immune to negative emotions, such as fear (Dasborough & Scandura, 2021). As leaders' emotions potentially impact employee reactions, the question arises as to which leader emotional display strategy would be the most advisable to implement in a crisis situation (Batchelor et al., 2018; Fisk & Friesen, 2012).

Although organizational crises are inherently emotional, research on leadership during crisis has so far predominantly focused on behavioral and cognitive approaches (Wu et al., 2021), which has brought forth recommendations for advisable leader attitudes and traits (e.g., empathy and compassion) (e.g., König et al., 2020), and leadership styles (e.g., transformational leadership) (e.g., Sommer et al., 2016). Regarding the emotional component of leader behavior during crisis, however, research is relatively scarce (Wu et al., 2021). One well-known research strand in leadership theory centers on emotional intelligence, that is, the individual ability to regulate own and others' emotions (Salovey & Mayer, 1990), a crucial ability for leaders to decide on appropriate and beneficial strategies with regard to employee reactions (Dasborough et al., 2021). However, not every leader might be adequately equipped with this ability by nature (Gardner et al., 2009), and there is limited knowledge on which explicit emotional display strategy might be most emotionally intelligent in crisis situations.

Two forms of emotion regulation strategies are deep acting (i.e., making an effort to display positive emotions) and surface acting (i.e., showing positive emotions that are not really felt) (Grandey, 2003; Hochschild, 1983). The alternative to regulating emotions is the display of genuine emotions (Ashforth & Humphrey, 1993; Diefendorff et al., 2005), and which, in a crisis context, could be the display of *fear*.

A leader's choice between either regulating emotional displays or revealing genuine emotions in front of employees in a crisis situation resembles a tradeoff. Extant research generally postulates that leaders should spread positive emotions during crisis (Belkin & Kong, 2021) to radiate confidence and optimism among employees, which could be achieved by engagement in emotion regulation (Humphrey et al., 2015; Humphrey et al., 2008). However, emotion regulation strategies differ in their effectiveness: Existing studies show that observers generally perceive a leader's deep acting as authentic, which in turn increases, for instance, employees' organizational commitment (Moin, 2018). At the same time, research also points to the negative consequences of emotion regulation (Grandey & Melloy, 2017)—for instance, when emotions are only superficially regulated by surface acting (Fisk & Friesen, 2012). Still, research on the benefits and detriments of deep and surface acting is inconsistent, as other studies show that *both* deep and surface acting are negatively related to employees' attitudes (Batchelor et al., 2018) and that infrequent surface acting can also have positive effects on followers' performance (Wang & Seibert, 2015).

Alternatively, leaders could choose to reveal their genuine emotions in a crisis, for example, their *fear*. The revelation of fear can be seen as an embodiment of authentic behavior (Luthans & Avolio, 2003), as authentic leaders are characterized by the genuineness in their emotional expressions (Ilies et al., 2013). Employees could perceive the display of genuine emotions as a trustworthy and transparent behavior in a crisis situation, as leaders share their inner and true feelings (Ilies et al., 2005). However, previous research assumes that

a leader's authentic display of fear during crisis could trigger negative emotions and discouragement among employees, which could negatively impact employees' attitudes and behaviors (Humphrey, 2012), resulting in a negative emotional spiral within a firm (Barsade, 2002).

Considering the possible downsides of the described strategies, the question of which emotional display strategy might be most advisable for leaders in the context of a crisis remains (Batchelor et al., 2018; Fisk & Friesen, 2012). To approach this question, we employ an experimental pre-post design with a hypothetical crisis scenario, utilizing the COVID-19 crisis as an example for an external threat. In our scenario, we specifically focus on a young firm, because we intend to examine a highly emotionally laden context, which can be found in the setting of young firms (Burch et al., 2013). Drawing on the emotions as social information (EASI) model (van Kleef, 2009), we explore employees' reactions, specifically their job engagement and affective commitment, mediated by their affective responses.

Our study has the following contributions. First, our findings provide novel insights into the role of genuine emotions as an alternative to deep or surface acting (Humphrey et al., 2015), thereby providing a more comprehensive picture of emotional display strategies than previous studies in the leadership context, which only focused on deep and surface acting (see Batchelor et al. (2018) as an exception). Furthermore, to the best of our knowledge, our study is the first attempt to compare the consequences of the three leader emotional display strategies in the specific context of a crisis. As emotions imply distinct meanings under different circumstances (George & Zhou, 2002), it is crucial to investigate discrete emotional displays in specific contexts (Batchelor et al., 2018; Grandey & Melloy, 2017). We therefore focus on a leader's *fear* as one potential negative genuine emotion that can occur during crisis, and we aim to disentangle the tradeoff between the three emotional display strategies.

Second, we expand research on the underlying mechanisms of employees' reactions to leaders' emotional display strategies. Most existing studies start from the implicit premise that leaders' expressed emotions are genuine and employees automatically adopt those emotions (Wang & Seibert, 2015)—but research on the impact of leaders' regulated emotions is still scarce. The few existing studies investigated the direct effects of leaders' emotional displays on employees' reactions, by implicitly arguing with underlying affective mechanisms (Batchelor et al., 2018; Moin, 2018; Wang & Seibert, 2015), but not explicitly testing them as mediating mechanisms. To deepen our understanding of explanatory factors of the complex relationship between leaders' emotional displays and employees' reactions, we investigate the mediating mechanism of employees' induced affect as a precondition for employees' job engagement and affective commitment.

Third, our experimental vignette study extends literature on the emotional component of leadership during crisis, thereby responding to recent calls by scholars who emphasized the importance of incorporating the emotion regulation lens with regard to leader behavior (e.g., Wu et al., 2021). By exploring the benefits and detriments of the different leader emotional display strategies, we provide tangible implications for both leadership theory and practice. Furthermore, we embed our study results in two established research streams in the leadership domain, namely, leader emotional intelligence (Salovey & Mayer, 1990) and authentic leadership (Luthans & Avolio, 2003). Our findings result in recommendations for a leader's emotionally intelligent behavior to achieve favorable employee reactions in a crisis situation, and we discuss the important component of authenticity with regard to advisable emotional displays.

3.2 Theoretical background

Leader emotional displays during crisis can have far-reaching and long-term effects on employee attitudes and behaviors (Dasborough & Scandura, 2021)—especially during an

external threat, which leads to feelings of belongingness between leaders and employees (Breugst et al., 2020), and during which employees are particularly dependent on their leaders for guidance (Madera & Smith, 2009). We conduct our experimental study using the example of nonestablished, young firms, because they operate in a highly emotional and uncertain environment (Cacciotti & Hayton, 2015), where external threats, such as the COVID-19 pandemic, are particularly precarious for the firm and employees' jobs (Kuckertz et al., 2020), making employees' job engagement and affective commitment crucial. At the same time, young firms with few employees provide a context with direct leader–employee relationships, in the sense that organizational leaders are key figures for employees, in contrast to a “distant” CEO as in more established organizations (Michael D. Ensley et al., 2006). This, in turn, makes leaders' emotional displays potentially more influential, and their appropriate behavior especially important.

3.2.1 Leaders' emotional display strategies during crisis

Research postulates that leaders should align their emotional behavior to certain contexts, such as a crisis, which embodies a leader's ability to regulate emotions (i.e., as a subdimension of emotional intelligence), which in turn should lead to positive employee outcomes (Dasborough et al., 2021; Salovey & Mayer, 1990). In crisis contexts, extant literature generally suggests displaying positive emotions as being most advisable for leaders, because employees potentially adopt these positive emotions that may lead to beneficial outcomes in uncertain situations, namely, confidence, optimism, resilience, and the ability to cope with a situation (Fredrickson, 2001; Humphrey et al., 2015; Humphrey et al., 2008).

At the same time, leaders may be struggling with the same negative emotions as their employees during crisis (Humphrey et al., 2008), which puts them in the position of either having to regulate their emotions or revealing their genuine emotions (e.g., their fear). Negative emotions are not always harmful, as they can potentially lead to support and

motivation (Madera & Smith, 2009). However, in a crisis context, extant literature suggests that a leader's display of negative emotions has detrimental effects on employees, because they potentially adopt these emotions, which may limit their personal resources (Fredrickson, 2001) and their performance (Humphrey et al., 2008).

Emotion regulation research to date has predominantly focused on a leader's deep and surface acting (Fisk & Friesen, 2012; Moin, 2018; Wang & Seibert, 2015), whereas the alternative strategy of displaying genuine emotions remains underexplored (Batchelor et al., 2018). Deep acting is the effort to really engage in a certain emotion and modify felt emotions (Grandey, 2003). Surface acting, on the other hand, is the superficial adjustment of emotions—meaning that displayed emotions are not really felt (Ashforth & Humphrey, 1993; Grandey, 2003). Existing research demonstrates that observers are able to recognize different forms of emotion regulation and detect if emotions are only regulated superficially (i.e., by surface acting) or if someone really tries to engage in a certain emotion (i.e., by deep acting) (Diefendorff et al., 2005; Fisk & Friesen, 2012; Grandey, 2003). As an alternative to engaging in emotion regulation, individuals have the option to show their spontaneous, genuine emotions (e.g., their fear), which is defined as the natural way of expressing emotions and hence the congruency between felt and shown emotions (Ashforth & Humphrey, 1993; Diefendorff et al., 2005; Mesmer-Magnus et al., 2012).

While extant research reveals that individuals high in (self-rated) emotional intelligence generally prefer deep over surface acting (Mesmer-Magnus et al., 2012), studies with objectively measured emotional intelligence show that individuals high in that ability use both deep and surface acting across different situations (Grandey & Gabriel, 2015). At the same time, there is little knowledge on the effects of displaying genuine emotions as an alternative to deep and surface acting (Batchelor et al., 2018; Fisk & Friesen, 2012), and it is

unclear which emotional display strategy is most beneficial and, thus, emotionally intelligent in a crisis situation.

3.2.2 Leaders' emotional displays as information for employees

We explore the effects of a leader's emotional display on employees by drawing on the EASI model that specifies both affective and inferential processing of emotional displays by observers, which in turn influence their attitudes and behaviors (van Kleef, 2009). Whereas the affective path accounts for a transfer of emotions, the inferential path indicates that emotions contain information, which observers cognitively process (van Kleef, 2009; Wang & Seibert, 2015). This inferential processing is especially relevant in a crisis, as employees look to their leaders for information on how to interpret uncertain situations (Pescosolido, 2002). Hence, following the EASI model, employees may be influenced not only by the positive or negative emotions that are displayed by their leader but also by the concomitant information, that is, *how* emotions are displayed (van Kleef, 2009).

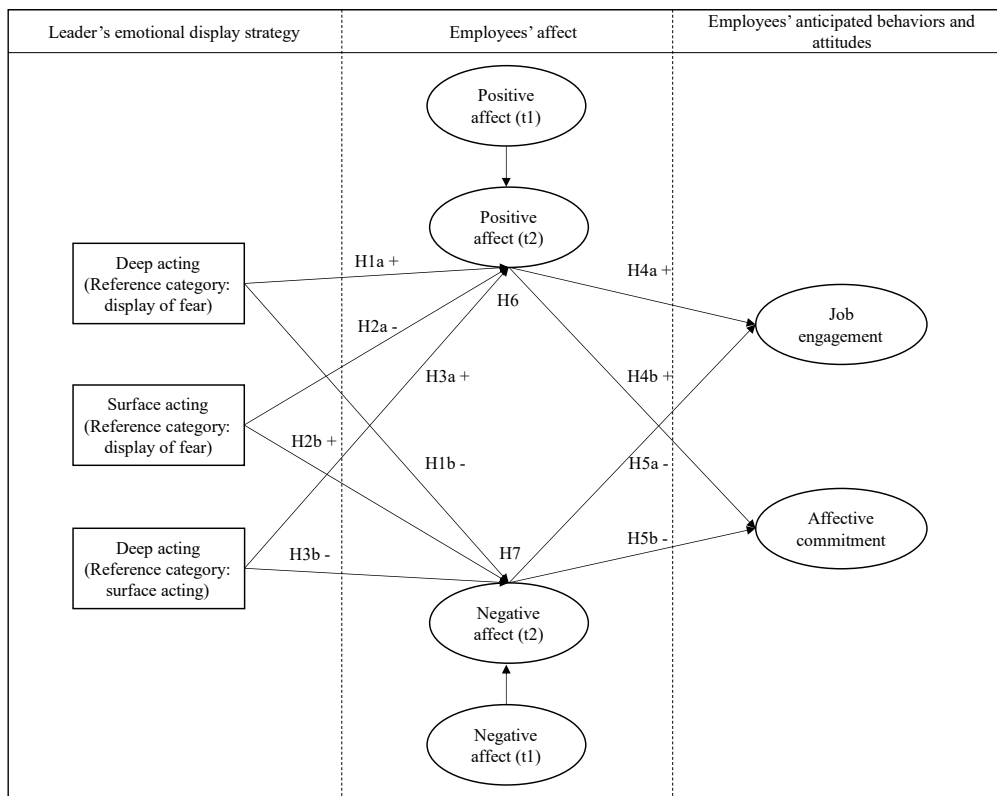
In the emotion regulation literature, scholars point out that the different emotional display strategies differ in their perceived authenticity by observers (Fisk & Friesen, 2012; Gardner et al., 2009). Observers commonly perceive deep acting as a more authentic strategy than the rather superficial strategy of surface acting, but the most authentic form of showing emotions is the display of genuine emotions (Gardner et al., 2009). Authenticity, in turn, forms an essential part of leader behavior, as the congruency of a leader's values, goals, and emotions commonly leads to various positive outcomes (Luthans & Avolio, 2003). Authentic leaders are more genuine in their emotional expressions (Ilies et al., 2013), and studies show that authentic leadership has positive outcomes on perceived leader effectiveness (Ilies et al., 2013), and trust in the leader (Gardner et al., 2009). We follow the argumentation of extant literature that the authenticity of emotional displays plays a crucial role in employees' perceptions and, thus, in their inferential processing (van Kleef, 2009), which we will

elaborate on in the following hypothesis development. At the same time, we will question the reasonableness of negative emotional authenticity (i.e., display of fear) in the specific context of a crisis, as this could potentially lead to negative affective, attitudinal, and behavioral employee reactions (Dasborough & Scandura, 2021; Fisk & Friesen, 2012; Humphrey et al., 2008).

3.2.3 Hypothesis development

In our study, we compare the three leader emotional display strategies and subsequent employees' reactions by specifically focusing on a leader's initial communication of an emerging crisis. Based on the rationale that displayed emotions can induce changes in observers' affect (Hennig-Thurau et al., 2006), we suggest that a leader's emotional display leads to changes in employees' positive and negative state affect, which subsequently influences their affective commitment and job engagement (see **Figure 3-1**).

Figure 3-1: Conceptual research model



Note. Employees' positive affect and negative affect (t1) were measured after participants read the hypothetical crisis scenario before they were randomly assigned to one of the three vignettes.

We incorporate deep acting and surface acting as two strategies for displaying positive emotions, and we compare them to our designated reference category, genuine emotions (i.e., display of fear).

First, we expect a leader's *deep acting* to evoke positive affective reactions in employees in comparison to our reference category, a leader's genuine emotions (i.e., display of fear). Previous studies have shown that the effort of displaying a positive emotion by deep acting has positive implications for observers' affective reactions (Hennig-Thurau et al., 2006), because individuals engaging in deep acting try to align their inner feelings and outward expressions (Brotheridge & Lee, 2003; Mesmer-Magnus et al., 2012). Thereby, they create a sense of perceived authenticity (Hennig-Thurau et al., 2006), which will assure employees that the shown positive emotions are real, and which will act as a mechanism for employees to adopt these positive emotions. Moreover, employees will inferentially judge the leader's emotional display and interpret the authentic positive emotions as a signal for opportunity and hope and as an indicator that there is no need to worry (Humphrey, 2012; Nifadkar et al., 2012). Employees are also likely to appreciate the leader's effort to spread positive emotions (Levine & Wald, 2020), which signals employees that the leader values them (Moin, 2018).

In comparison, we expect the display of fear to have opposite effects on employees' affect. Employees perceive genuine emotions as even more authentic than deep acting, so that employees will fully trust and believe the leader's emotional display (Gardner et al., 2009). At the same time, employees will interpret the leader's display of fear as a signal on how to evaluate the crisis situation and adopt this negative affective disposition (Humphrey et al., 2008). We therefore hypothesize:

H1. *In a crisis situation, a leader's deep acting is (a) positively related with employees' positive affect and (b) negatively related with employees' negative affect compared with a leader's genuine display of fear.*

Second, we expect a leader's *surface acting* to lead to negative affective reactions in employees in comparison to a leader's genuine emotions (i.e., display of fear). Although a leader's surface acting includes the display of positive emotions, research has shown that the concomitant perception of emotional inauthenticity constrains positive contagion processes (Hennig-Thurau et al., 2006). Employees will question the intention behind a leader's disguise of emotions (van Kleef, 2009; Wang & Seibert, 2015), which will also cause employees to scrutinize the truthfulness of the leader's report on the situation of the firm. Moreover, the superficial regulation of emotions will signal a low level of personal regard for employees (Fisk & Friesen, 2012), and it could also lead to employees' suspicion that their leader is trying to manipulate them (Dufour et al., 2019; Fisk & Friesen, 2012).

In comparison, although the display of fear implies the potential adoption of negative affect by employees, genuine emotions are perceived as authentic and trustworthy (Gardner et al., 2009)—whereas inauthentic positive emotions are perceived as phony (Fisk & Friesen, 2012), which will spoil the positive impact of surface acting on employees' affect. Therefore, we assume that the factor of inauthenticity will prevail in this case, making a leader's surface acting the worse option with regard to employees' affective reactions. We therefore hypothesize:

H2. *In a crisis situation, a leader's surface acting is (a) negatively related with employees' positive affect and (b) positively related with employees' negative affect compared with a leader's genuine display of fear.*

To provide a more differentiated picture of the two emotional display strategies involving the active regulation of emotions (Ashforth & Humphrey, 1993), we additionally compare a leader's deep and surface acting. Although both strategies imply a leader's display of positive emotions, they differ in their degree of authenticity (Grandey et al., 2005). Existing research has shown that a leader's deep acting is preferable to surface acting for employees' attitudes and behaviors, as surface acting led to decreased employees' job

satisfaction (Fisk & Friesen, 2012) and organizational commitment (Moin, 2018). Regarding affective reactions, research indicated that only authentic positive emotional displays lead to an increase in observers' positive affect (Hennig-Thurau et al., 2006). We reassess this reasoning in our crisis context and expect that a leader's deep acting will increase employees' positive affect and decrease employees' negative affect in comparison to surface acting, because deep acting signals employees that the displayed positive emotions are honest (Humphrey, 2012), and hence make it likely that employees adopt these emotions. We therefore hypothesize:

***H3.** In a crisis situation, a leader's deep acting is (a) positively related with employees' positive affect and (b) negatively related with employees' negative affect compared with a leader's surface acting.*

Following the assumptions of the EASI model, employees' affective and inferential reactions will influence their attitudes and behaviors (van Kleef, 2009). We specifically investigate two variables that depend on employees' affective states, namely, employees' job engagement as the full investment of their cognitive and emotional energies into their work roles (Kahn, 1992; Rich et al., 2010) and affective commitment as a job attitude that indicates the involvement of employees in their organizations (Allen & Meyer, 1990). Both concepts are antecedents of employees' performance at work (Allen & Meyer, 1990; Rich et al., 2010); thus, we consider them as highly relevant during a young firm's crisis. As we conduct a hypothetical experiment, and participants have to mentally put themselves into the described crisis situation, we measure participants' *anticipated* behaviors and attitudes.

First, we expect employees' positive affect to be positively related with job engagement because positive affect is likely to facilitate employees to engage and interact in activities at work and to make personal resources available (Fredrickson, 2001). Positive affective states also improve employees' attention and tendency to take action (Fredrickson,

2001). Conversely, employees who experience negative affect (e.g., anxiety) tend to have less motivation to engage in their work roles (Hu et al., 2020).

Second, employees' affective states are associated with affective commitment because positive affect increases employees' proactivity and the focus on their jobs (Breugst et al., 2012; Fredrickson, 2001). Negative affective states, in contrast, decrease the willingness of employees to involve themselves in their organizations (Shepherd et al., 2011).

Thus, we formulate the following hypotheses, which account for the proposed mediating mechanisms of employees' positive and negative affect:

H4. In a crisis situation, employees' positive affect is positively related with employees' anticipated (a) job engagement and (b) affective commitment.

H5. In a crisis situation, employees' negative affect is negatively related with employees' anticipated (a) job engagement and (b) affective commitment.

H6. In a crisis situation, employees' positive affect mediates the relationship between a leader's emotional display strategies and employees' anticipated (a) job engagement and (b) affective commitment.

H7. In a crisis situation, employees' negative affect mediates the relationship between a leader's emotional display strategies and employees' anticipated (a) job engagement and (b) affective commitment.

Considering the limited knowledge on advisable leader emotional display strategies, we experimentally explore the hypothesized employees' reactions with a vignette study, which we will describe in the following section.

3.3 Method

We applied a one-factorial, pre-post between-subject design using a written hypothetical scenario and three vignettes as our treatments. Experimental vignette studies are an increasingly popular instrument in the leadership context to investigate individuals' attitudes and behaviors in the context of hypothetical real-life events (Taylor, 2005), as they

offer the opportunity to establish causal relationships in controlled settings in which participants are independent of external influences that could confound results (Aguinis & Bradley, 2014). Furthermore, controlled vignette studies provide a viable opportunity to examine sensitive topics such as an emotionally charged crisis context and the perception of emotions (Aguinis & Bradley, 2014).

3.3.1 Sample

For the implementation of our study, we employed an online panel of a certified (ISO 20252:2019) German online sample provider. Before we conducted our main study, we pretested the vignettes and the questionnaire with a sample of 62 employees and made minor changes in the wording of items and study instructions to increase comprehensibility. Afterwards, the online sample provider invited potential participants for our main study by e-mail, based on our inclusion criteria of full- and part-time employees. Participants who are registered in the online panel earn credits by participating in surveys, but they received no other specific incentive for participating in our study.

For our main sample, we recruited 159 participants from the working population. We consider these individuals suitable for our study because currently employed participants are able to empathize with a crisis situation in the workplace, as they are at least hypothetically aware of the possibility of financial difficulties that could ultimately lead to the loss of their jobs and firm failure. Slightly more than half of our participants were female (50.9%), and the mean age was 44.87 years ($SD = 11.41$). Full-time and part-time employment was reported by 81.8% and 18.2% of our participants, respectively. On average, participants had 22.65 years ($SD = 12.52$) working experience.

3.3.2 Development of scenario and vignettes

We followed the recommendations by Aguinis and Bradley (2014) for conducting vignette studies and designed our hypothetical scenario and the three vignettes as realistic and

comprehensible as possible so that participants could mentally put themselves in the hypothetical situation. The scenario and vignettes can be found in the **Appendix B**.

We conducted a pre-post measurement to measure the process from affective to attitudinal and behavioral reactions and provided all participants with the same baseline information, that is, the general description of a hypothetical crisis scenario, which also ensured validity of our between-subjects design (Aguinis & Bradley, 2014).

We asked participants to imagine that they were working in a young firm with 40 employees and that they were attending a meeting with their CEO, who announces that the development of the firm during the COVID-19 crisis has led to a serious liquidity strain. We focused on this real-life threat, which coincided with the period of our data collection, to make the situation particularly realistic and to ensure that participants could identify with the scenario (Aguinis & Bradley, 2014). We focused on the role of the CEO in our context, rather than a team leader, to stress the severity and credibility of the crisis announcement for participants. Furthermore, to further intensify the emotionality of the described situation, we explicitly emphasized the employee's immediate relationship with the leader. Regarding participants' anticipated behaviors and attitudes, we aimed to ensure that participants sensed that the described situation could be overcome by the employee's active cooperation in dealing with the crisis (e.g., by expanding the firm's online activities).

After our participants read the hypothetical crisis scenario, we measured participants' baseline affect as the pre-measurement of our pre-post design (t1). Afterwards, participants were randomly and equally assigned to one of the three vignettes. In each of the vignettes, we described one of the three emotional display strategies, which included a description of the facial expression and behavior of the described CEO: the CEO's genuine emotions, that is, the display of fear (Vignette 1, 52 participants), deep acting (Vignette 2, 53 participants), and surface acting (Vignette 3, 54 participants). The number of vignettes was theory-driven

(Aguinis & Bradley, 2014) and based on the assumption in the literature that there are three different emotional display strategies (Ashforth & Humphrey, 1993; Diefendorff et al., 2005). After reading one of the three vignettes, we measured participants' affect as the post-measurement of our pre-post design (t2), as well as participants' anticipated affective commitment and job engagement.

3.3.3 Measures

We adapted the description of the leader's emotion regulation from the Emotional Labor Scale (Brotheridge & Lee, 2003) to provide a theoretically well-founded manipulation (Aguinis & Bradley, 2014). We analyzed all hypothesized effects of the leader's deep and surface acting in comparison to genuine emotions (i.e., display of fear) as our reference category; hence, we built two dichotomous dummy variables (deep acting and surface acting). For the direct comparison between deep and surface acting (H3), we calculated an additional dichotomous variable without the genuine emotions vignette.

In our pre-post design, we measured *employees' positive affect and negative affect* twice with eight items from the International Positive and Negative Affect Schedule-Short Form (Thompson, 2007). The four items measuring state positive affect were determined, attentive, inspired, and active, with anchors ranging from 1 (*not at all*) to 5 (*very much*). Cronbach's alphas were 0.79 (t1) and 0.86 (t2). The four items measuring state negative affect were afraid, nervous, upset, and hostile. Cronbach's alphas were 0.67 (t1) and 0.71 (t2).

We measured *employees' job engagement* with two items from the emotional engagement subscale of the Job Engagement Scale (Rich et al., 2010). We slightly adjusted the wording of the items to fit into the context of our scenario. Items were "I would continue working enthusiastically" and "I would feel energetic at my job," with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was 0.88.

We measured *employees' affective commitment* with two slightly adjusted items from the Affective Commitment Scale (Allen & Meyer, 1990). Items were “I would feel emotionally attached to my employer” and “I would feel a strong sense of belonging to my employer,” with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was 0.94.

As it is plausible that employees' trait affect could influence their state affect as well as their consequential attitudes and behaviors, we measured *employees' trait positive affect and negative affect* as control variables (“In general, how did you feel in the past year?”), with the same items as state affect. Cronbach's alpha was 0.84 for trait positive affect and 0.83 for trait negative affect. We also assessed participants' gender, age, educational level, and working experience in years.

For our manipulation check, we measured *perceived inauthenticity of the leader's emotional display* with three items. We slightly adjusted two items from Grandey et al. (2005) and one item from Côté, Hideg, et al. (2013). Items were “The CEO's emotions seem genuine” (R), “The CEO's emotions seem insincere,” and “The CEO seems to pretend emotions,” with anchors ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was 0.92.

3.3.4 Quality instruments

We undertook several steps to ensure data quality. First, we implemented a manipulation check (Shadish et al., 2002) after participants read one of the three vignettes to ensure that participants understood the vignettes correctly. We asked participants to select the correct emotional display strategy (e.g., “The CEO tries to actually feel and experience the displayed positive emotions” for participants who read the deep acting vignette). A false answer led to the participant's exclusion from the survey.

As a second manipulation check, we investigated the differences in perceived inauthenticity between the three vignettes by conducting a one-way analysis of variance (ANOVA) and Tukey post hoc comparisons. Perceived inauthenticity differed significantly, $F(2, 156) = 65.50, p < 0.01$, revealing the highest mean for a leader's surface acting ($M = 3.70, SD = 1.05$), whereas a leader's deep acting ($M = 2.10, SD = 0.87$) and a leader's genuine emotions ($M = 1.80, SD = 0.78$) were perceived as less inauthentic. In line with theoretical expectations, Tukey post hoc analysis showed a significant difference ($p < 0.01$) between a leader's surface acting and genuine emotions (1.85, 95% CI[1.43, 2.27]) as well as deep acting (1.60, 95% CI[1.18, 2.01]). No significant difference between a leader's genuine emotions and a leader's deep acting regarding perceived inauthenticity was found, supporting the assumption that these two strategies are perceived as similarly authentic (Gardner et al., 2009).

Third, we conducted a reality check (Maute & Dubé, 1999) with two items measuring the realistic representation of the scenario and vignettes ("How realistic was the described situation?"; anchors ranging from 1 [*not realistic at all*] to 5 [*very realistic*]; mean = 4.03) and their validity ("How well were you able to put yourself into the described situation?"; anchors ranging from 1 [*very poor*] to 5 [*very well*]; mean = 4.16). The high means confirmed that our participants assessed our scenario and vignettes as realistic, which endorses the validity of our experiment.

3.3.5 Analytical procedure

To investigate our hypothesized research model, we applied structural equation modeling (SEM) (Anderson & Gerbing, 1988). First, we estimated the measurement model for a confirmatory factor analysis (CFA) and included the latent variables positive affect, negative affect, affective commitment, and job engagement. Fit indices include chi-square statistics (χ^2), the comparative fit index (CFI), and the root mean square error of

approximation (RMSEA) (Hu & Bentler, 1999). The CFA with positive affect and negative affect, as initially measured in our study with four items per affect dimension, showed a poor fit to our data ($\chi^2 = 622.40$, $df = 155$, $p = 0.00$, CFI = 0.76, RMSEA = 0.14). An investigation of the factor loadings revealed that the model misfit occurred due to the measurement of negative affect. Accordingly, we built a second model, with negative affect comprising two distinct factors: one factor “fear” for the two items afraid and nervous and one factor “hostility” for the two items upset and hostile. The measurement model with the two-factor solution for negative affect showed a better fit to our data ($\chi^2 = 289.40$, $df = 142$, $p = 0.00$, CFI = 0.92, RMSEA = 0.08); thus, we selected this five-factor model as the basis for the following analyses.

To account for the two measurement time points of our mediators’ employees’ positive affect, fear, and hostility, we based our analyses on the principles of autoregressive models (Geiser & Lockhart, 2012). By conducting a two-step approach, we compared our former model without autoregressive error term covariances with a different model including all possible error covariances of the t1 and t2 items of positive affect, fear, and hostility ($\chi^2 = 171.50$, $df = 134$, $p = 0.02$, CFI = 0.98, RMSEA = 0.04). Although the model with all possible error covariances showed a better fit to the data, this complex model returned a Heywood case (Dillon et al., 1987); hence, in a stepwise manner, we added only significant error covariances between the t1 and t2 items ($\chi^2 = 184.81$, $df = 139$, $p = 0.01$, CFI = 0.98, RMSEA = 0.05). Because the model with significant error covariances showed a better fit than the model without any error covariances, we determined this as our final model.

3.4 Results

3.4.1 Descriptive statistics

Table 3-1 reports the means, standard deviations, and correlations of our variables.

Table 3-1: Means, standard deviations, and correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Deep acting	.33	.47															
2. Surface acting	.34	.48	-.51**														
3. Positive affect (t1)	3.70	.69	-.02	.04													
4. Positive affect (t2)	3.66	.74	.13	-.11	.61**												
5. Fear (t1)	3.43	1.03	-.05	.04	-.11	-.06											
6. Fear (t2)	3.26	1.10	-.29**	.11	.04	-.13	.70**										
7. Hostility (t1)	2.05	.87	.00	.07	-.40**	-.17*	.25**	.07									
8. Hostility (t2)	1.87	.93	-.27**	.40**	-.14	-.39**	.14	.24**	.41**								
9. Affective commitment	3.72	.96	.12	-.26**	.32**	.52**	.05	.07	-.24**	-.52**							
10. Job engagement	3.39	.93	.17*	-.25**	.35**	.64**	-.18*	-.30**	-.12	-.44**	.58**						
11. Trait positive affect	3.70	.67	-.07	.06	.55**	.52**	-.11	-.03	-.05	-.04	.25**	.37**					
12. Trait fear	2.60	1.10	-.11	.09	-.04	-.03	.46**	.43**	.25**	.22**	-.08	-.09	-.10				
13. Trait hostility	2.10	.94	-.10	.06	-.01	-.07	.29**	.24**	.32**	.26**	-.20*	-.12	-.17*	.59**			
14. Perceived inauthenticity	2.55	1.22	-.27**	.67**	-.07	-.27**	.04	.20**	.10	.58**	-.46**	-.43**	.03	.10	.08		
15. Gender	0.49	.50	-.11	.17*	-.01	-.01	-.13	-.14	.06	.02	-.02	-.05	.10	.18*	-.06	.02	
16. Age	44.90	11.40	-.04	.06	.07	.03	-.22**	-.16	-.08	-.06	-.06	-.03	.02	-.03	-.07	.00	.19*

Note. $n = 159$; Gender: female = 0, male = 1. * $p < .05$, ** $p < .01$.

3.4.2 Results of the SEM

Table 3-2 and **Figure 3-2** show the results of our experimental SEM. We applied Swain correction due to our large model and rather small sample size (Herzog et al., 2007) and estimated the SEM with all direct and indirect effects ($\chi^2 = 221.74$, $df = 175$, $p = 0.01$, CFI = 0.98, RMSEA = 0.04). Although the χ^2 test was significant at $p < 0.05$, the fit indices indicated that this complex model displayed a good fit to the data. To account for our control variables, we also tested a model with trait positive affect, trait fear, and trait hostility as covariates of our mediators and endogenous variables. The SEM showed a worse fit to our data ($\chi^2 = 469.34$, $df = 344$, $p = 0.00$, CFI = 0.94, RMSEA = 0.05), and only trait positive affect revealed a significant effect on state positive affect (t2) ($b = 0.27$, $\beta = 0.21$, $p < 0.05$). Because incorporating control variables worsened the model fit and did not change the results of our SEM, we excluded them from further analysis.

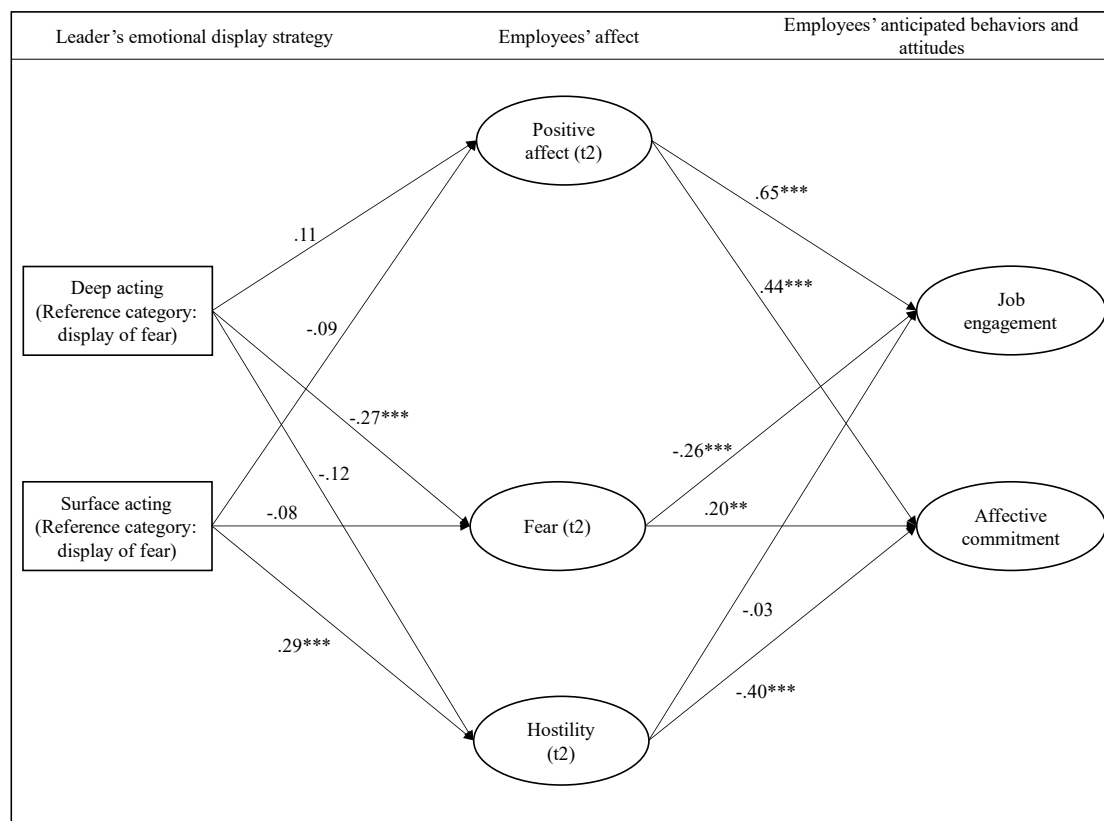
Our results not only partially support our hypotheses but also offer unexpected insights into the influence of different emotional display strategies on employees. Regarding employees' positive affect, both a leader's deep acting and a leader's surface acting showed no significant differences compared with a leader's display of fear ($p > 0.05$), thus, **H1a** and **H2a** were rejected. However, a leader's deep acting decreased, as expected, employees' fear ($p < 0.001$), which partially supported **H1b**. On the other hand, a leader's deep acting was not related with employees' hostility ($p > 0.05$). Compared with a leader's display of fear, a leader's surface acting increased employees' hostility ($p < 0.001$), partially supporting **H2b**, but it did not influence employees' fear ($p > 0.05$).

Regarding the direct effects of our mediators on outcomes variables, employees' positive affect increased employees' anticipated job engagement ($p < 0.001$) and affective commitment ($p < 0.001$), which supported **H4a** and **H4b**.

Table 3-2: Results of the SEM (Model 1)

	Positive affect			Fear			Hostility			Job engagement			Affective commitment		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Direct effects															
Deep acting	.17	(.12)	.11	-.48	(.12)	-.27***	-.22	(.14)	-.12	-.20	(.12)	-.11	-.13	(.14)	-.06
Surface acting	-.14	(.12)	-.09	-.13	(.11)	-.08	.52	(.14)	.29***	-.34	(.13)	-.19**	-.21	(.15)	-.11
Positive affect										.77	(.11)	.65***	.58	(.12)	.44***
Fear										-.27	(.07)	-.26***	.22	(.08)	.20**
Hostility										-.03	(.09)	-.03	-.44	(.10)	-.40***
Total indirect effects															
Deep acting										.26	(.12)	.14*	.08	(.12)	.04
through positive affect										.13	(.10)	.07	.10	(.07)	.03
through fear										.13	(.05)	.07**	-.11	(.05)	-.05*
through hostility										.01	(.02)	-.01	.10	(.07)	.05
Surface acting										-.09	(.12)	-.05	-.34	(.13)	-.17***
through positive affect										-.11	(.09)	-.05	-.08	(.07)	-.04
through fear										.04	(.03)	.02	-.03	(.03)	-.01
through hostility										-.01	(.05)	.00	-.23	(.09)	-.13**
Total effects															
Deep acting										.07	(.15)	.04	-.04	(.17)	-.02
Surface acting										-.42	(.16)	-.23**	-.55	(.17)	-.28***

Notes. Reference category: display of fear; *b* = unstandardized effect; *SE* = standard error; β = standardized effect; *n* = 159; number of bootstrap samples = 2,000.

Figure 3-2: Results of the SEM (Model 1)

Note. Model fit: $\chi^2 = 221.74$, $df = 175$, $p = .01$, CFI = .98, RMSEA = .04. Standardized coefficients are given.

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

Whereas employees' fear diminished employees' anticipated job engagement as expected ($p < 0.001$), it positively influenced affective commitment ($p < 0.01$). Employees' hostility decreased employees' anticipated affective commitment ($p < 0.001$) but not employees' anticipated job engagement ($p > 0.05$). Thus, both **H5a** and **H5b** were partially supported.

Regarding the mediating mechanisms, we found a significant indirect effect between a leader's deep acting and employees' anticipated job engagement via the three mediators ($p < 0.05$) but no indirect effect on employees' anticipated affective commitment ($p > 0.05$). Between a leader's surface acting and employees' anticipated affective commitment, we found a significant indirect effect via the three mediators ($p < 0.001$) but no indirect effect on employees' anticipated job engagement ($p > 0.05$). We found partial support for employees' fear and hostility (i.e., negative affect) as mediators but not for employees' positive affect. Therefore, we rejected **H6a** and **H6b**, but we found partial support for **H7a** and **H7b**.

3.4.3 Robustness check

For a robustness check of our results, we assessed participants' experience in a young firm, defined as participants' former or current employment in a firm with firm age up to 10 years (Haltiwanger et al., 2013) ("Have you been or are you employed in a young firm (firm age <10 years)?" with response categories [*Yes, I am currently employed in a young firm*], [*Yes, I was already employed in a young firm*], and [*No, none of the above*]). We applied a multi-group analysis with participants who currently work or have worked in a young firm ($n = 41$) and with participants who have not worked in a young firm before ($n = 118$). Following the procedure suggested by Byrne et al. (1989), we first tested for measurement invariance by constraining our measurements to be equal among the two groups. This showed a nonsignificant increase in χ^2 ($p > 0.05$) between the unconstrained model ($\chi^2 = 511.80$, $df = 350$, $p = 0.00$, CFI = 0.92, RMSEA = 0.05) and the constrained model ($\chi^2 = 527.64$, $df = 362$, $p = 0.00$, CFI = 0.92, RMSEA = 0.05), hence implying measurement invariance. Afterwards, we constrained the regression weights across the two groups to test for structural invariance (Byrne et al., 1989). This, in turn, also showed a nonsignificant increase in χ^2 ($p > 0.05$) between the unconstrained model and the constrained model ($\chi^2 = 556.60$, $df = 381$, $p = 0.00$, CFI = 0.92, RMSEA = 0.05), thus implying structural invariance. This comparison between participants with and without working experience in a young firm confirms that there was no statistical significant difference between the two groups.

3.4.4 Results of the reduced SEM

To further explore the differences between deep and surface acting, which we hypothesized in **H3**, we tested a reduced SEM without genuine emotions (i.e., display of fear). This reduced SEM showed a satisfactory fit to our data ($\chi^2 = 209.67$, $df = 163$, $p = 0.01$; CFI = 0.97.; RMSEA = 0.05). Results are reported in **Table 3-3** and reveal that a leader's deep

acting positively influenced employees' positive affect ($p < 0.01$) and decreased employees' fear ($p < 0.01$) and hostility ($p < 0.001$) compared with a leader's surface acting. Thus, we found support for **H3**. Moreover, we found significant indirect effects on job engagement and affective commitment ($p < 0.05$), indicating a mediating effect of employees' positive and negative affect between a leader's emotional display and employees' anticipated behaviors and attitudes.

3.5 Discussion

To address our research question of which leader emotional display strategy would be the most advisable during crisis regarding employees' reactions, we conducted an experimental vignette study and utilized the emotionally laden context of a young firm's crisis. The results of our experiment have several theoretical and practical implications.

3.5.1 Theoretical implications

First, we contribute to the literature on the impact of different leader emotional display strategies on employees' reactions in times of crisis. Although the emotion regulation literature repeatedly emphasized the importance of conducting studies in extraordinary and highly emotionally laden contexts, research in this domain is scarce (Wu et al., 2021). We extend existing knowledge by incorporating both a leader's active emotion regulation (i.e., deep and surface acting) and the display of genuine emotions (i.e., display of fear) in one comprehensive model. This juxtaposition of the two well-known emotion regulation strategies with showing genuine emotions allowed us to explore the relationship between the three possible emotional display strategies and employees' reactions in a broader context than in previous research (Humphrey et al., 2015), which provides partly unexpected implications for leader behavior during crisis. In particular, our results show that a leader's deep acting is only partially preferable compared with the display of fear in a crisis situation.

Table 3-3: Results of the reduced SEM (Model 2)

	Positive affect			Fear			Hostility			Job engagement			Affective commitment		
	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β
Direct effects															
Deep acting															
Positive affect	.29	(.11)	.20**	-.36	(.12)	-.21**	-.75	(.14)	-.43***	.15	(.14)	.09	.17	(.16)	.09
Fear										.91	(.15)	.74***	.83	(.16)	.62***
Hostility										-.26	(.09)	-.24**	.19	(.10)	.17*
Total indirect effects										.02	(.12)	.02	-.21	(.14)	-.19
Total effects															
Deep acting										.35	(.15)	.20*	.33	(.14)	.17*
through positive affect										.27	(.12)	.15*	.24	(.11)	.13*
through fear										.09	(.05)	.05**	-.07	(.05)	-.04
through hostility										-.01	(.12)	-.01	.16	(.12)	.08
Total effects															
Deep acting										.50	(.17)	.28***	.51	(.17)	.26**

Notes. Reduced model without display of fear; reference category: surface acting; *b* = unstandardized effect; SE = standard error; β = standardized effect; *n* = 107; number of bootstrap samples = 2,000.

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

With regard to the total effects of our model, a leader's deep acting showed no differences to the display of fear, whereas a leader's surface acting showed detrimental effects on employees' reactions in terms of their anticipated job engagement and affective commitment. Concerning employees' affect, we found that a leader's deep acting indeed reduced employees' fear, whereas a leader's surface acting increased hostility. However, surprisingly, both emotion regulation strategies attempting to display positive emotions had no effects on employees' positive affect compared with display of fear. Our results contradict past assumptions that it might be generally more advisable for leaders to regulate emotions than to reveal their negative emotions (Fisk & Friesen, 2012) and that leaders' displays of positive emotions were imperative in crisis situations (Humphrey et al., 2008). A possible explanation for the unexpected similarity between the display of fear and deep acting could be rooted in the perceived authenticity of those strategies. Our results suggest that it is not the positivity or negativity of the emotional display that is the most decisive factor in a crisis situation but the congruency and, hence, perceived authenticity of displayed emotions (Mesmer-Magnus et al., 2012), which both deep acting and the display of genuine emotions imply to a certain degree (Batchelor et al., 2018; Gardner et al., 2009). Rather than favoring the display of positive and optimistic emotions, employees apparently first and foremost place value on authentic emotions—even when these are negative. This finding supports the concept of authentic leadership, which constitutes that leaders should reveal their inner selves to followers, and, by that, create relational transparency (Ilies et al., 2013). Although original notions of authentic leadership focused mainly on the expression of positive emotions and signals (e.g., hope, optimism) (Ilies et al., 2005; Luthans & Avolio, 2003), more recent studies state that authentic behavior can also include the expression of negative emotions with positive outcomes on followers (Ilies et al., 2013)—a notion supported by our study results. Our results also correspond to recent study findings on leader behavior, which showed that leaders who

acknowledge their worries in a crisis are likely to motivate employees (Hu et al., 2020), whereas leaders' dishonest behaviors generally lead to negative employee reactions (e.g., Zoghbi-Manrique-de-Lara & Viera-Armas, 2019). Thus, our results suggest that research should strive for a more nuanced view of the traditional postulate that leaders should display positive emotions during crisis (Humphrey et al., 2008), as these are only effective when they are displayed in an authentic manner. The results of our reduced model, with the comparison between deep and surface acting, give further insights into the role of these well-known emotion regulation strategies and confirm the general preference of deep acting over surface acting (Grandey & Melloy, 2017).

Second, we shed light on the mediating mechanisms underlying employees' reactions in terms of positive and negative affect by utilizing the EASI model. Whereas previous research proposed direct effects on employees' attitudes and behaviors (Batchelor et al., 2018; Fisk & Friesen, 2012; Moin, 2018), this study shows that employees' affect plays an important explanatory role to understand how employees' affective commitment and job engagement are influenced. Our results reveal that a leader's emotional displays did not directly influence employees' anticipated behaviors and attitudes, but that this relationship was facilitated by the leader's influence on employees' affect. Especially employees' negative affect, but not positive affect, seems to play a vital role as a mediating mechanism. Nonetheless, our mediation model also shows that employees' positive affect was positively related with employees' anticipated job engagement and affective commitment, whereas the opposite was partially the case for negative affect (i.e., fear and hostility). This partially confirms the assumptions of the broaden-and-build theory, which assigns individuals' positive affect more favorable outcomes on thoughts and actions than individuals' negative affect (Fredrickson, 2001). Our results implicate that leaders who are successful in inducing positive affect in employees by their emotional displays may achieve beneficial outcomes regarding

employees' attitudes and behaviors. Remarkably, we found a positive effect of employees' fear on their anticipated affective commitment, further underscoring that experiencing fear during crisis is not always harmful. Because we found no significant effects on employees' positive affect by neither deep nor surface acting, our results also indicate that in a (hypothetical) crisis situation—an inherently negative event—it may be more difficult to influence employees' positive affect than negative affect. This, in turn, underlines the importance of further research to disentangle the traditional postulation of leaders' displays of positive emotions as being imperative in a crisis (Humphrey et al., 2008).

Our findings correspond to the EASI model's idea that displayed emotions are processed through an affective and inferential path (van Kleef, 2009). In our experiment, the leader's emotional displays did not lead to an *automatic* adoption of emotions by employees, a finding which indicates that employees indeed inferentially judged the emotional displays and that this subsequently influenced their anticipated job engagement and affective commitment (van Kleef, 2009). In sum, these results provide a deeper understanding of the mechanisms underlying employees' reactions, and they open the door for the investigation of other variables that are dependent on employees' affect.

Third, our study provides further knowledge on the emotional component of leader behavior during crisis, which connects with two different important research streams in the leadership domain, namely leader emotional intelligence and leader (emotional) authenticity. Scholars emphasize that emotional intelligence plays a crucial role in selecting appropriate emotional displays and achieving positive employee outcomes (Dasborough et al., 2021), but research lacks evidence on which strategy might be the most emotionally intelligent in specific situations. With regard to desirable employee outcomes, our study highlights that a leader's emotionally intelligent behavior in a crisis can include the display of either positive or negative emotions—if they are perceived as authentic. Although emotions are only one

component of leader authenticity as a leader's congruency between values and actions (Luthans & Avolio, 2003), our results still correspond to the established assumption that effective leaders should strive for the display of authentic behavior (Ilies et al., 2013)—in our case embodied by a leader's deep acting and display of fear, which had more positive outcomes on employee reactions than a leader's inauthentic surface acting.

However, determining the most advisable emotional display strategy for leaders during crisis is not only a question of employees' perceptions, but it must also consider leaders' personal consequences of engaging in emotion regulation. Building on the conservation of resources (COR) theory (Hobfoll, 1989), studies found that the effort of engaging in emotion regulation leads to resource depletion with more harmful effects associated with surface acting than with deep acting (Grandey & Melloy, 2017). In contrast, scholars describe the expression of genuine emotions as a resource-preserving way of displaying emotions (Arnold et al., 2015). Although intense negative emotions can similarly cause emotional exhaustion (Glomb & Tews, 2004), past research suggested that the additional regulatory effort demands resources from individuals (Hülshager & Schewe, 2011). This line of argumentation, although untested in our study, could support our argument that the display of genuine emotions (i.e., fear) is superior to emotion regulation during crisis—because showing genuine emotions has only partly different effects than deep acting on employees' reactions, while it preserves leaders' resources at the same time.

3.5.2 Practical implications

A young firm that is already in distress is highly dependent on appropriate leader behavior. Our experiment shows that when leaders feel fear in a crisis situation, they should only choose to engage in emotion regulation if they manage to make it appear authentic. Specifically, our findings indicate that leaders should consider showing their fear during crisis instead of engaging in emotion regulation by all means. This reasoning is aggravated by the

individual differences between the ability to convincingly engage in emotion regulation as an embodiment of emotional intelligence (Humphrey, 2012). Leaders who are less able to regulate their emotions in a way that seems authentic to employees (i.e., by deep acting) and are at risk of (even unintentionally) displaying inauthentic emotions should consider expressing genuine emotions to positively influence employees' reactions and to avoid a negative emotional spiral under critical circumstances (Barsade, 2002).

Although leaders, especially in young firms, face a broad spectrum of possible emotional displays, as they commonly have few formal rules on how to display emotions (Burch et al., 2013), our findings show that not all emotional display strategies are equally advisable. Moreover, our results disagree with the idea that to be effective, leaders should always display positivity by engaging in emotion regulation (Humphrey et al., 2008). In sum, we demonstrate that displaying positive emotions is not feasible at any price, but that leaders should only display them in an authentic manner to avoid negative employee reactions.

3.5.3 Limitations and future research

While our experimental approach allowed us to investigate causal links between a leader's emotional displays and participants' reactions, our approach is not without limitations, which offer avenues for future research.

First, as our participants had to visualize a fictional leader, we did not consider social-relational factors (e.g., leader–employee relationships and previous behavior) of the EASI model (van Kleef, 2009). Future research could search for ways to incorporate these aspects in real-life contexts while circumventing the disadvantages of cross-sectional studies (Aguinis & Bradley, 2014). Thereby, research could investigate additional behavioral (e.g., employee resilience) and relational (e.g., leaders' perceived effort or effectiveness, leader liking, and trust in leader) outcomes. To explore relationships between different leader emotional display

strategies and long-term outcomes (e.g., employee turnover, leader survival, and, ultimately, firm survival), scholars could employ longitudinal approaches.

Second, we focused on specific emotional display strategies and a leader's fear as one potential discrete emotion. At the same time, in a crisis situation, leader's emotional display could also imply anger or sadness (Madera & Smith, 2009). Leaders' displays of anger have been linked to less leader effectiveness in a crisis, probably making emotion regulation the more favorable strategy; whereas sadness, on the other hand, could be interpreted as a sign of a leader's concern for the employees and the firm (Madera & Smith, 2009). Furthermore, individuals regularly combine different emotional displays (Gabriel et al., 2015), hence, future research could use longitudinal methods (e.g., experience sampling studies) to investigate employees' reactions to leaders' combinations of different strategies throughout the course of a crisis.

Furthermore, future research could explore the message content of a leader's communication behavior, for instance regarding social accounts (e.g., explanations for changes in the organization) and subsequent employees' reactions, which may also be influenced by the degree of perceived authenticity and sincerity (Sitkin & Bies, 1993).

Third, we chose the economic consequences of the COVID-19 crisis and the case of a young firm as a specific context for our scenario. While we expect that our findings are applicable to other external threats (e.g., economic crisis), future research could explore how the context of an internal threat changes employees' reactions, for instance, with regard to the appropriateness of a leader's display of fear in comparison to emotion regulation.

Additionally, although we chose the context of a young firm, our findings are to some extent transferable to small teams in established organizations in which similar direct leader–employee relationships exist and in which employees may feel that their jobs are at risk during crisis.

Finally, we did not examine a leader's own experience of engaging in emotional display strategies. Future research could collect dyadic data to investigate both employees' and leaders' perspectives to further explore a leader's most advisable emotional display strategy during crisis.

3.6 Conclusion

Leaders' emotional displays and subsequent employee reactions play an important role during crisis, as each employees' engagement and commitment are crucial for firm performance and survival (Madera & Smith, 2009). The results of our experimental vignette study extend the limited knowledge on the emotional component of leader behavior during crisis (Wu et al., 2021) and indicate that leaders should not shy away from showing their fear as an embodiment of genuine emotions, as the engagement in deep and surface acting does not have exclusively positive effects on employees' reactions.

4. Daily emotion regulation strategies and their impact on employee creativity and performance³ (Essay III)

Abstract

Employees constantly face situations requiring emotion regulation at work, and extant research, especially in the service context, has shown that emotion regulation strategies (i.e., deep acting and surface acting) have distinct outcomes on well-being and attitudes at work. However, knowledge is limited about how employees' emotion regulation strategies affect creativity and performance in organizational contexts, particularly on the day level, as well as the underlying affective mechanism of this relationship. Additionally, the influence of general emotion regulation ability on how employees' emotion regulation strategies influence their affective well-being is still underexplored. Drawing on conservation of resources (COR) theory, we conducted a one-week diary study with 103 participants, utilizing the context of small firms in which creative and high-performance behaviors are crucial predictors for firm success. We extend knowledge by showing that daily surface acting had negative within-person effects on creativity and performance, mediated by affective well-being. Daily deep acting positively affected our outcomes, and emotion regulation ability moderated the effect on affective well-being.

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4.1 Introduction

Employees' daily creativity and performance are indispensable for the success of organizations, and priority should be placed on ensuring these as essential key resources for firm performance (Anderson et al., 2014; Lua et al., 2023; Sonnentag et al., 2023), particularly in small firms (Atkinson, 2007; de Jong & Den Hartog, 2007; Laguna et al., 2021). Employees' daily creativity and performance, in turn, are strongly dependent on experienced emotions at work (Fredrickson, 2001), as well as on available individual resources (Hobfoll, 1989). Scholars have suggested that emotion regulation strategies, as a resource-consuming process (Grandey, 2000; Hobfoll, 1989), and emotion regulation ability, as individuals' ability to regulate emotions (Mayer & Salovey, 1997), need to be considered as important predictors for employees' creativity and performance (Grandey & Melloy, 2017; Parke et al., 2015). However, our knowledge is still limited on how emotion regulation—both as a strategy and as an ability—impacts creativity and performance on the day level (Batchelor et al., 2018; Grandey & Melloy, 2017).

Employees handle unwelcome emotions during interpersonal interactions by applying one of two emotion regulation strategies as part of their emotional labor at work: deep acting (i.e., trying to engage in emotions) or surface acting (i.e., superficially concealing emotions) (Grandey, 2000; Hochschild, 1983). Originally stemming from research in the service context (Diefendorff et al., 2005; Grandey, 2000), emotion regulation—especially the superficial adjustment of emotions, known as surface acting—can be harmful for employees' health, job satisfaction, and service performance (Bhave & Glomb, 2016; Grandey & Gabriel, 2015; Grandey & Melloy, 2017; Hülshager & Schewe, 2011). Following conservation of resources (COR) theory (Hobfoll, 1989), employees' emotion regulation requires effort, which in turn, negatively impacts well-being, attitudes, and behaviors at work (Grandey & Gabriel, 2015; Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012). While we know much about the

influence of employees' emotion regulation strategies in the service context (e.g., during interactions with customers), the impact of employees' emotion regulation during interactions with their colleagues and supervisors on their creativity and performance in an organizational context has received less attention so far (Grandey & Melloy, 2017)—especially on the day level. This is surprising given that employees who work in firms equally need to regulate their emotions at work (Grandey, 2000) with emotion regulation strategies varying on a daily basis, potentially affecting employee behavior (Judge et al., 2009).

At the same time, the specific affective mechanism of how emotion regulation influences behavioral outcomes is still an unresolved issue in current research. Since emotion regulation is considered as a precursor to affective well-being (Hülshager & Schewe, 2011), and this, in turn impacts individuals' behaviors (Fredrickson, 2001), affective well-being may be a central mediator for the link between emotion regulation and creativity as well as performance (Grandey & Melloy, 2017).

Concurrently, the role of emotion regulation ability as part of individuals' emotional intelligence (Mayer & Salovey, 1997), still remains underexplored (Grandey & Melloy, 2017). While scholars ascribe a major role to this ability for the success of employees, specifically in the small firm context (Miao et al., 2017), research remains scarce on the interrelation between the ability and the effects of emotion regulation (i.e., rather than a *predictor* of the use of different strategies) (Grandey & Melloy, 2017; Peña-Sarrionandia et al., 2015). Especially on the day level, there is a need to investigate the influence of emotion regulation ability, as this may determine how employees are affected by different emotion regulation strategies.

Based on the current state of the literature, this study addresses the research question of how daily deep acting and daily surface acting influence affective well-being, creativity, and performance of employees. We propose that employees' daily deep acting and surface

acting differentially influence their affective well-being, which in turn, impacts daily creativity, in-role performance, and extra-role performance. We conducted a one-week daily diary study with 103 employees, and we examined the effects of employees' daily emotion regulation during interpersonal interactions, thereby extending previous research that primarily focused on the service interaction between service employees and customers, but has rarely examined behavioral outcomes of employees within an organizational context (Grandey & Melloy, 2017; Hülshager & Schewe, 2011; Matta et al., 2014).

We utilize the small firm context (i.e., firms with less than 50 employees) as an environment in which the exploration of interpersonal interactions that involve emotion regulation are of great importance because employees work together more closely within smaller firms (Wilkinson, 1999). Furthermore, as small firms have limited resources by nature (Greene et al., 1997), employees' preservation of resources and the resulting creativity and performance are crucial factors for small firms' success (Atkinson, 2008). While in-role performance represents the daily completion of work tasks (Goodman & Svyantek, 1999), both creativity as well as extra-role performance are behaviors that go beyond employees' regular job descriptions and, hence, are paramount for achieving organizational goals and growth in small firms (Amabile et al., 2005; Janssen, 2000).

Our research offers the following contributions. First, by drawing on COR theory and employing a daily diary design, we extend our understanding of emotion regulation as a daily changing behavior of employees working in small firms (Judge et al., 2009), which is important as employees may be more or less able to engage in specific work behaviors on a given day depending on their available resources (Weinberger et al., 2018; Williamson et al., 2019). To the best of our knowledge, we are among the first to investigate the link between *daily* deep acting, daily surface acting, creativity, and performance of employees in an organizational context. We thereby extend past research on emotion regulation as a workplace

phenomenon that has so far mainly focused on performance and well-being of employees in the service context (Bhave & Glomb, 2016; Chi & Grandey, 2016; Grandey & Melloy, 2017; Hülshager & Schewe, 2011), by offering a novel perspective on emotion regulation that has important consequences for the specific behavioral outcomes of creativity and performance in an organizational setting.

Second, we examine the affective mechanism that underlies the association between emotion regulation and employees' behavioral outcomes. Specifically, we show that the relationships between daily emotion regulation and employees' outcomes are mediated by affective well-being on the daily within-person level. This implies that emotion regulation indeed indirectly influences employees' creativity and performance and that those behaviors are dependent on daily experienced emotions as well as on the specific emotion regulation strategy. The within-person results demonstrate that deep acting is more favorable than surface acting for both affective well-being and employees' behavioral outcomes.

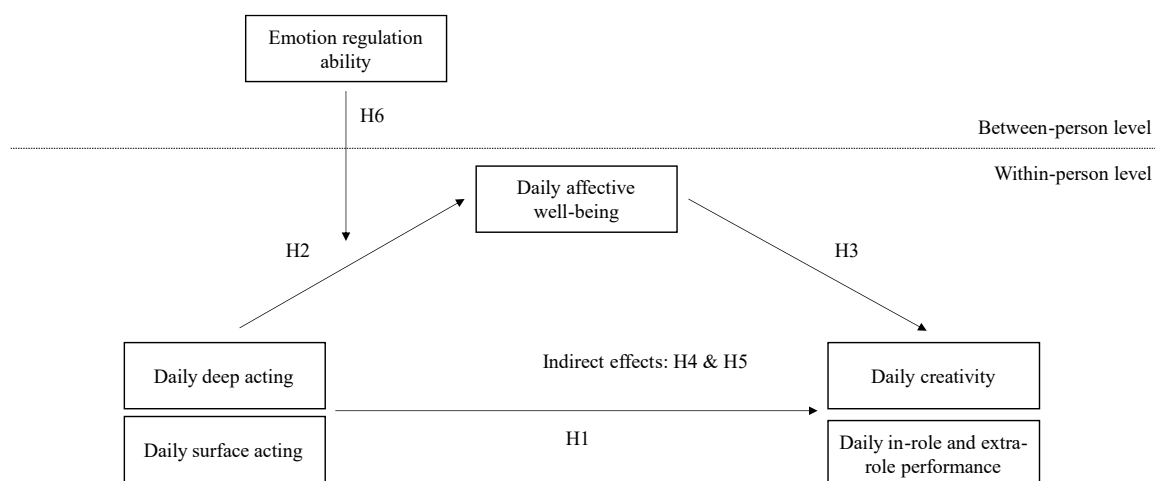
Third, we provide novel insights into the role of emotion regulation ability and its moderating effect on the link between emotion regulation strategies and affective well-being (Peña-Sarrionandia et al., 2015). Specifically, we show that emotion regulation ability moderates the effect of deep acting on affective well-being, whereas there is no significant effect with regard to surface acting. This implies that emotion regulation ability influences how employees are affected by their own deep acting, and that high emotion regulation ability strengthens the positive effect of deep acting on affective well-being.

4.2 Theoretical background

Apart from the fact that employees need to have substantive expertise to be able to thrive in their work roles, their creativity and performance is also dependent on their emotional experiences at work (Weiss & Cropanzano, 1996). Extant research on emotions at work has brought forth divergent findings, showing that both positive and negative emotions

can be beneficial for employee behavior (Amabile et al., 2005; Chi et al., 2015; George & Zhou, 2002; Rispens & Demerouti, 2016; To et al., 2015). However, particularly at work, individuals do not just passively experience certain emotional states, but they commonly regulate their emotions, specifically during interpersonal interactions (Grandey, 2000; Grandey & Melloy, 2017). While scholars have mainly focused on the direct link between daily emotions and daily employee behavior in diary studies (e.g., Bledow et al., 2013; Reizer et al., 2019; Rothbard & Wilk, 2011), we propose that behavioral outcomes predominantly depend on the emotion regulation strategies employees use to adjust their emotions in front of others at work (Grandey, 2000; Trougakos et al., 2015), which will be mediated by employees' resulting affective well-being (Grandey & Melloy, 2017). In addition, we suggest that employees' trait emotion regulation ability (i.e., as part of their emotional intelligence) (Brackett et al., 2006; Mayer & Salovey, 1997) will moderate the influence of their emotion regulation strategies. Our research model is depicted in **Figure 4-1**.

Figure 4-1: Conceptual research model



4.2.1 Emotion regulation in light of COR theory

According to COR theory, individuals' performance depends on daily resources (Hobfoll, 1989). In particular, stressful situations consume cognitive, emotional, or physical resources of individuals (Hobfoll, 1989). Emotion regulation is the response of individuals to stressful interactions and an inherently resource-consuming activity, which leads to exhaustion and strain (Grandey & Melloy, 2017). Due to emotion regulation, in turn, these resources are no longer available for the execution of other activities, such as creativity or performance (Grandey & Gabriel, 2015; Grandey & Melloy, 2017; Hobfoll, 1989).

Following the emotional labor literature, employees regulate their emotions at work with two different types of strategies, namely deep acting and surface acting (Brotheridge & Lee, 2003; Diefendorff et al., 2005; Grandey, 2000; Hochschild, 1983). While surface acting involves the superficial regulation of emotions by just pretending to feel a certain emotion, deep acting entails the effort to really engage in an emotion and trying to experience it (Brotheridge & Lee, 2003; Grandey, 2000).

Deep acting and surface acting represent two different ways that individuals engage with their emotions in a given situation: Deep acting comes into play before an unwelcome emotion completely arises, while surface acting resembles a more automatic mechanism that simply suppresses emotions (van Gelderen et al., 2017; Zapf, 2002). Therefore, deep acting changes how employees perceive stressful situations during interpersonal interactions, thereby preserving resources because further regulation of emotions is not required, while surface acting just conceals emotions (Schraub et al., 2013). Hence, surface acting is generally seen as costly to resources, as employees need to constantly fake their outer appearances, thereby having less energy to concentrate on their actual performance at work (Grandey, 2000; Xanthopoulou et al., 2018). Moreover, decreased resources can result in a defensive attitude (van Gelderen et al., 2017), which may be specifically problematic when extra-role behaviors

are required. Surface acting leads to incongruence between felt and shown emotions and to feelings of inauthenticity because individuals' outward expressions are not in alignment with their true emotions. This, in turn, leads to strain, which negatively impacts employee well-being, attitudes, and performance (Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012). Concealing emotions has been also linked to decreased memory and problem solving (Richards, 2004). In contrast to these findings, however, there is empirical evidence that surface acting can also have a positive impact on employee outcomes, depending on individual dispositions (Chi et al., 2011).

The link between deep acting and potential outcomes is less clear. Although deep acting creates a congruence between the emotions that are felt and shown (Mesmer-Magnus et al., 2012), deep acting requires similar effort as surface acting (Grandey & Melloy, 2017). In contrast to surface acting, employees who engage in deep acting may feel accomplished because they have successfully changed their felt emotions, which in turn leads to positive outcomes (Grandey & Melloy, 2017). However, extant studies disagree on which emotion regulation strategy may be generally more favorable for employees, as many studies found no significant relationships between deep acting and health or job satisfaction (Grandey & Melloy, 2017; van Gelderen et al., 2017).

Research on the daily use and impact of emotion regulation strategies in organizational contexts is limited, with two exceptions. Trougakos et al. (2015) explored the daily emotion regulation–performance link in the organizational context and found that employees' daily surface acting had a negative impact on organizational citizenship behavior directed toward others but the study failed to examine the impact of daily deep acting. Xanthopoulou et al. (2018), on the other hand, found that employees' surface acting led to decreased flow at work, while deep acting had positive effects on flow. These studies provide initial evidence of the advantages of deep acting over surface acting for individuals' behavior at work, and we will

reanalyze this phenomenon with regard to affective well-being, creativity, and performance in this diary study.

4.2.2 Daily creativity and performance at work

Crucial behaviors in small firms include creativity as well as in-role and extra-role performance (de Jong & Den Hartog, 2007; Laguna et al., 2021). Creativity entails the generation of novel ideas as one subdimension of innovative work behavior (Janssen, 2000). Employees' creativity is inherently a cognitively demanding process, which in turn plays an important role for small firm success (de Jong & Den Hartog, 2007; Laguna et al., 2021).

Traditionally, emotions are seen as antecedents of creativity (Amabile et al., 2005; George & Zhou, 2002), but findings on whether positive or negative emotions are more beneficial than the other are contradictory (Bledow et al., 2013). Based on these inconsistent findings, authors have proposed that creativity might be also dependent on the *regulation* of emotions, rather than just the mere experience of emotions (Ivcevic & Hoffmann, 2019; Parke et al., 2015). However, the relationship of emotion regulation with creativity has so far predominantly been investigated from a trait perspective (da Costa et al., 2020; Geng et al., 2014) or an ability perspective (Parke et al., 2015). While there are theoretical assumptions that emotion regulation as an ability might be beneficial for creativity in general, da Costa et al. (2020) found *negative* effects on creativity when frequently regulating anger at work, indicating that certain emotion regulation strategies may negatively influence creativity.

Initial evidence that deep acting and surface acting, as cognitively stressful processes, have different effects on creativity is provided by two cross-sectional studies. Specifically, both Hill et al. (2020) and Geng et al. (2014), found that deep acting is more favorable for creativity than surface acting.

Another important aspect of employees' behavior entails extra-role and in-role performance. Extra-role performance represents behavior that goes beyond usual job

expectations and is therefore specifically important for a small firm's success and growth (Laguna et al., 2021). In-role performance involves behavior that represents the daily achievement of work tasks (Goodman & Svyantek, 1999).

Both daily creativity and daily performance require cognitive resources of employees (Weinberger et al., 2018; Williamson et al., 2019), which may be influenced by the daily effort that emotion regulation strategies necessitate. Based on COR theory (Hobfoll, 1989), we propose that daily emotion regulation requires daily effort for individuals, which, in turn, influences their daily creativity and performance (van Gelderen et al., 2017). While deep acting may restore resources that are depleted by the effort to experience a certain emotion by successfully changing an emotional state, surface acting as a superficial way to regulate emotions will first and foremost deplete resources (Grandey & Melloy, 2017; Hülsheger & Schewe, 2011; Mesmer-Magnus et al., 2012) and, hence, negatively influence creativity and performance outcomes.

We propose that there may be different resource-consuming mechanisms associated with either deep acting or surface acting (Hülsheger & Schewe, 2011), with a positive influence of deep acting on creativity and performance outcomes, and a negative influence of surface acting on these outcomes. Therefore, we hypothesize:

***Hypothesis 1.** Employees' (a) daily deep acting positively influences creativity, in-role performance, and extra-role performance, whereas (b) daily surface acting negatively influences these outcomes.*

4.2.3 The mediating role of daily affective well-being

To explore the relationships between daily deep acting, surface acting, and creativity and performance, we argue that both deep acting and surface acting separately influence affective well-being (Scott & Barnes, 2011), which we define as the level of daily positive affect (Russell & Daniels, 2018). The daily state of affective well-being will subsequently

influence behavioral outcomes (Fredrickson, 2001). Although only few diary studies on emotion regulation have incorporated affective well-being into their models, there is empirical evidence that the felt incongruence of emotions and hence felt inauthenticity has effects on affective well-being, which, in turn, leads to distinct outcomes. For example, Scott and Barnes (2011) showed that bus drivers' daily surface acting predicted negative affect, whereas daily deep acting increased positive affect. Contrary to these results, Judge et al. (2009) showed that *both* deep acting and surface acting of customer service employees negatively affected their daily positive mood. Similarly, Lennard et al. (2019) found that managers experience less positive affect when they regulate their emotions rather than authentically showing their genuine emotions when interacting with their subordinates.

When individuals experience daily interactions in which they decide to engage in deep acting, they are really trying to change their current state of emotions by putting themselves into the situation at hand (Grandey, 2000). By that, they lose resources, but they are also able to regain them by successfully resolving this stressful situation, which, in turn, improves affective well-being (Grandey & Melloy, 2017). In contrast, employees who surface act only deal superficially with their emotions, making a stressful interaction even more draining and harmful for an employee's affective well-being (Brotheridge & Lee, 2003; Lennard et al., 2019). Based on this, we hypothesize that daily surface acting will lead to higher affective well-being, while expecting the opposite for deep acting.

Hypothesis 2. *Employees' (a) daily deep acting positively influences daily affective well-being, whereas (b) daily surface acting negatively influences daily affective well-being.*

While the emotion regulation strategies deep acting and surface acting have a differential impact on affective well-being, we expect that the daily state of affective well-being of employees, in turn, will influence employees' behavior, and will therefore represent a mediating mechanism in our model.

The relationship between affective well-being, creativity, and performance can be explained by broaden-and-build theory, which understands positive emotions as beneficial for performance outcomes (Fredrickson, 2001; Fredrickson & Branigan, 2005). Prior research has shown that the experience of positive emotions broadens cognitive abilities and concentration (Amabile et al., 2005; Fredrickson, 2001; George & Zhou, 2007) as well as creative behavior (Bledow et al., 2013; Sonnentag et al., 2023) and task performance (Chi et al., 2015; Rispens & Demerouti, 2016). The mechanism behind the positive influence of positive emotions on behavioral outcomes lies in the fact that the experience of positive emotions enhances the thought–actions repertoire, which improves employees’ motivation to take action (Fredrickson, 2001).

Based on that, the link between deep acting, surface acting, and our behavioral outcomes can be explained by the effort that surface acting implies for individuals, which decreases affective well-being, while deep acting will increase affective well-being (Grandey & Melloy, 2017; Mesmer-Magnus et al., 2012). This, in turn, influences the performance of individuals at work, because affective well-being as the experience of positive emotions will positively influence daily creativity and performance (Fredrickson, 2001; Fredrickson & Branigan, 2005). We therefore hypothesize:

Hypothesis 3. *Employees’ daily affective well-being is positively related to daily (a) creativity, (b) in-role performance, and (c) extra-role performance.*

Hypothesis 4. *Employees’ daily affective well-being mediates the relationship between daily deep acting and daily (a) creativity, (b) in-role performance, and (c) extra-role performance.*

Hypothesis 5. *Employees’ daily affective well-being mediates the relationship between daily surface acting and daily (a) creativity, (b) in-role performance, and (c) extra-role performance.*

4.2.4 The moderating role of general emotion regulation ability

Individual dispositional differences may cause employees to perceive the burden of emotion regulation differently than others, and emotion regulation ability has been proposed as a crucial influencing factor with regard to the experience of deep acting and surface acting (Grandey & Melloy, 2017). Emotion regulation ability entails the ability to regulate and monitor emotions (Brackett et al., 2006; Mayer & Salovey, 1997). In this diary study, we define emotion regulation ability as the general self-perceived ability to handle stressful situations (Brackett et al., 2006). While emotion regulation ability as a general construct (e.g., as part of emotional intelligence) is well-studied in the small firm and entrepreneurship literature (Miao et al., 2017), the relationship between emotion regulation ability and emotion regulation strategies remains underexplored (Grandey & Melloy, 2017; Peña-Sarrionandia et al., 2015). Specifically, knowledge about the moderating influence of emotion regulation ability on the association between emotion regulation strategies and well-being is still in its infancy, especially on the day level (Scherer et al., 2020).

Following the emotional labor literature, emotion regulation ability may influence how emotion regulation affects employees' well-being (Grandey & Melloy, 2017; Scherer et al., 2020). Empirical cross-sectional evidence on this relationship is provided by Prati et al. (2009), who showed that emotion regulation ability generally decreases strain that is induced by surface acting. Similarly, Scherer et al. (2020) demonstrated that emotion regulation ability influenced the daily experienced exhaustion of service employees when they used surface acting.

According to COR theory, a stressful event induces strain (Hobfoll, 1989). Surface acting—as a superficial response to an event—even amplifies this strain because employees feel stressed about the inauthenticity that results from surface acting (Grandey & Gabriel, 2015). Thus, if individuals are better able to manage their emotions due to higher emotion

regulation ability, this strain might be easier to handle because these individuals use surface acting as an *intentional* strategy to respond to unwelcome emotions and feel less stressed about the potential inauthenticity.

In contrast, deep acting diminishes the negative outcomes because individuals try to solve the situation by engaging in a certain emotion, which improves their feeling of personal accomplishment (Hülshager & Schewe, 2011). Therefore, emotion regulation ability might enhance this positive effect of deep acting on affective well-being because employees feel higher accomplishment, which increases affective well-being. Hence, we formulate the following hypothesis:

Hypothesis 6. *Employees' emotion regulation ability moderates the relationship between daily (a) deep acting and affective well-being and (b) surface acting and affective well-being, such that emotion regulation ability weakens the negative effect of surface acting on affective well-being, whereas emotion regulation ability strengthens the positive effect of deep acting on affective well-being.*

4.3 Method

4.3.1 Sample

The data analyzed in this study was part of a larger dataset on daily emotional experiences at work. To measure daily relationships of employee emotion regulation, affective well-being, creativity, and performance, we conducted a daily diary study over the course of six consecutive working days (i.e., Monday to Monday, excluding the weekend). For our sample, we employed a European ISO certified online sampling provider (ISO 20252:2019) that was responsible for recruiting the sample and hosting the survey. Our sample included 103 individuals from the German working population, who indicated that they were employed in a small firm (i.e., a firm with less than 50 employees) at the time of

our study. Age of our participants ranged from 19 to 68 years, mean age of our sample was 47.3 years ($SD = 12.46$), and 53.74% were female.

On average, participants reported that they were employed for 10.6 years ($SD = 9.36$) in their respective firms, which had an average firm size of 15.64 employees ($SD = 23.31$). Approximately two-thirds of the participants were employed full-time (65%), and the rest (35%) were employed part-time. Participants had an average of 5.00 hours ($SD = 5.72$) daily interaction time with others at work, which confirmed that it was reasonable to analyze the *interpersonal* emotion regulation strategies deep acting and surface acting.

4.3.2 Procedure

Four days before the start of our daily diary study, the online sample provider approached potential participants who met our recruitment criteria. Participants were invited to take part in our study, framed as a “diary study about work,” and were told that they could earn a specific number of virtual points by participating, which subsequently could be redeemed in vouchers. Participants were asked whether they were planning to take time off in the next week, which led to their exclusion if they were unavailable. After the eligible participants agreed to take part in the diary study, they completed a baseline questionnaire that included potential between-person variables, that is, the dispositional and demographic characteristics of participants.

Starting on the following Monday, participants received a daily e-mail invitation at 5 p.m. reminding them to participate in our daily diary study. Before participants could access the daily diary survey, they were asked whether they had worked that day, and they were screened out when they indicated that they had not worked. Participants were allowed to complete their daily responses until midnight of the respective day to ensure that they remembered the information we were assessing on that day. As a measure of the quality of our data, one attention check per day (“For this item, please select strongly agree”) was

included in the daily questionnaire (Barber et al., 2013), which rotated daily in its presentation at three different positions in the questionnaire.

Initially, 160 participants filled out the baseline questionnaire before the start of our diary study. The daily diary study, in turn, led to 441 daily observations by 103 participants. Sixteen participants failed one or more daily attention checks, which led to their exclusion on that respective day, and 23 participants took part in the daily diary study less than three days. Additionally, 62 observations could not be included because participants reported in the respective daily survey that they had not been working that day. These exclusion steps resulted in 441 observations from 103 participants who took part in the daily diary study on three or more days that were available for our analysis.

4.3.3 Measures

Means, *SDs*, and correlations of the variables can be found in **Table 4-1**. We measured all variables using a 7-point scale with anchors ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

We measured *daily deep acting* and *surface acting* with six items from the Emotional Labour Scale developed by Brotheridge and Lee (2003) that we adapted for the daily measurement in our diary study. Items for deep acting were “Today, at work, I tried hard to actually feel the feelings I needed to show in front of others,” “Today, at work, I tried to really feel the emotions I showed,” and “Today, at work, I tried to actually feel the emotions I had to show in front of others.” Cronbach’s alpha ranged from .87 to .94 (for this and the other measures reported here these values varied depending on the day). Items for surface acting were “Today, at work, I pretended to have emotions in front of others that I didn’t really have,” “Today, at work, I hid my true feelings about a situation from others,” and “Today, at work, I tried not to express my true feelings in front of others.” Cronbach’s alpha ranged from .87 to .95.

Table 4-1: Descriptive statistics

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
Level 1 (Within-person)												
1. Surface acting	2.21	1.37	—	-.01	-.23	.04	-.09	-.04				
2. Deep acting	3.19	1.53	.22	—	.16	.02	.09	.08				
3. Affective well-being	4.48	1.27	-.48	.06	—	.22	.26	.28				
4. Creativity	3.28	1.44	.03	.04	.37	—	.28	.29				
5. In-role performance	5.65	1.06	-.40	-.12	.50	.16	—	.26				
6. Extra-role performance	3.90	1.40	.09	.19	.29	.63	.10	—				
Level 2 (Between-person)												
7. Emotion regulation ability	5.18	1.35	-.20	-.21	.23	.04	.43	.10	—			
8. Trait affective well-being	4.85	1.18	-.35	.05	.69	.38	.48	.29	.44	—		
9. Gender	.46	.50	-.17	.03	.14	.22	-.08	.07	-.01	.09	—	
10. Age	47.30	12.46	-.11	-.22	.06	-.09	.22	-.23	.32	-.09	.07	—

Note. Level 1, $n = 441$; Level 2, $n = 103$. Gender (0 = female, 1 = male). Within-person correlations are shown above the diagonal, between-person variables are shown below the diagonal.

All correlations above $|.09|$ are significant at $p < .05$. All correlations above $|.16|$ are significant at $p < .01$.

We measured *daily affective well-being* with five items from a shortened PANAS-SF scale by Watson et al. (1988). Participants were asked to indicate the extent of how they felt today at work for the items excited, enthusiastic, alert, inspired, and determined. Cronbach's alpha for this measure ranged from .89 to .92.

We measured *daily creativity* with three items from a scale by Janssen (2000) that measures idea generation as part of innovative work behavior that was adapted by Weinberger et al. (2018) for the purposes of diary studies. Items were "Today I developed new ideas for difficult questions," "Today I asked myself how things can be improved," and "Today I made an effort to develop original solutions to problems." Cronbach's alpha for this measure ranged from .86 to .92.

We measured *daily in-role and extra-role performance* with six items from a scale by Goodman and Svyantek (1999), which we adapted for our diary study with three items for each dimension. Items for *in-role performance* were "Today I achieved the goals of my workday," "Today I performed well by completing tasks as expected of me at work," and "Today I met all the requirements of my job." Cronbach's alpha for this measure ranged from .84 to .96. For the measurement of *extra-role performance*, items were "Today I volunteered to do more at work than was required of me," "Today I tried to help someone I was working with," and "Today I volunteered to do tasks that are not expected of me by my company." Cronbach's alpha for this measure ranged from .75 to .89.

In the baseline questionnaire, we measured *emotion regulation ability* with three items from a scale developed by Brackett et al. (2006), using the subscale "managing emotion (self)." Items were "I can handle stressful situations at work without getting too nervous," "I am able to deal with emotionally upsetting problems at work," and "I know how to stay calm in difficult or stressful situations at work." Cronbach's alpha for this measure was .88.

As emotional states and consequential behaviors can be influenced by *trait affective well-being*, we measured this control variable in the baseline questionnaire with five items from a shortened PANAS-SF scale by Watson et al. (1988). Participants were asked to indicate how they felt in general in the last year, with items assessing excited, enthusiastic, alert, inspired, and determined. Cronbach's alpha for this measure was .90. Additionally, to account for potential influencing demographical factors, we controlled for *age* and *gender* of our participants.

4.3.4 Analytical strategy

We analyzed our daily diary data by following the guidelines by Bolger and Laurenceau (2013). Responses of the daily survey ($n = 441$) were nested within individuals ($n = 103$), which means that the data have a hierarchical structure and therefore necessitates a multilevel analysis that takes the dependency of between-person and within-person observations into account (Bolger & Laurenceau, 2013). Whereas the dispositional variables that were measured in the baseline survey are second-level data (i.e., emotion regulation ability and controls), data from the daily survey (i.e., daily emotion regulation strategies, affective well-being, creativity, in-role and extra-role performance) represent first-level data (Bolger & Laurenceau, 2013; Ohly et al., 2010).

For our multilevel mediation analysis, we conducted a regression-based path analysis with manifest variables (Mu et al., 2024; Preacher et al., 2010). In diary studies, within-person effects are analyzed over time, and to decrease confounding effects between levels, daily independent variables should be group-mean-centered (Bolger & Laurenceau, 2013). Variables on the between-person level, on the other hand, should be grand-mean-centered (Bolger & Laurenceau, 2013). For our analysis, we used the package *lavaan* (Rosseel, 2012) in R (R Core Team, 2022), which automatically partitions variables into their within and between components (Preacher et al., 2010).

As the first step of our analysis, we analyzed within-person and between-person variances, represented by intraclass correlations (ICCs) (Tomczyk et al., 2022). Analyses of our dependent variables showed that 73.1% of the variance in affective well-being is between-person (i.e., 26.9% of the variance in affective well-being is within-person), 65.3% of the variance in creativity is between-person (i.e., 34.7% of the variance in creativity is within-person), 52.4% of variance in in-role performance is between-person (i.e., 47.6% of the variance is within-person), and 56.4% of extra-role performance is between-person (i.e., 43.6% of the variance in extra-role performance is within-person).

As a second step, we analyzed three mediation models with one dependent variable each, and we accounted for the covariance between our two independent variables deep acting and surface acting in our mediation models (Preacher et al., 2010). Paths were modeled analogously on both the within-person and the between-person levels (Postema et al., 2021). In one separate model, we additionally estimated the cross-level interactions of emotion regulation ability with our group-mean-centered predictors, using the package *lme4* (Bates et al., 2014) in R (R Core Team, 2022).

4.4 Results

4.4.1 Results of the multilevel analyses

Results of our multilevel analyses on the daily within-person level are depicted in **Table 4-2**. Employees' daily deep acting did not significantly influence our outcome variables creativity, in-role performance, and extra-role performance, which was also the case for the daily surface acting. Therefore, Hypothesis 1 can not be supported. With regard to Hypothesis 2, however, employees' engagement in surface acting negatively influenced affective well-being ($b = -.19; p < .001$), and deep acting positively influenced affective well-being ($b = .11; p = .002$). Therefore, Hypothesis 2 is fully supported.

Table 4-2: Results of multilevel analyses

	Affective well-being (Mediator)			Creativity (Dependent variable)			In-role performance (Dependent variable)			Extra-role performance (Dependent variable)		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
<i>Within-level</i>												
Surface acting	-.19	.04	<.001	.10	.06	.098	-.04	.06	.480	.03	.07	.626
Deep acting	.11	.04	.002	-.02	.05	.738	.04	.05	.331	.03	.06	.569
Affective well-being				.32	.07	<.001	.31	.07	<.001	.43	.08	<.001
Indirect effect surface acting				-.06	.02	.002	-.06	.02	.002	-.08	.02	.001
Indirect effect deep acting				.04	.01	.012	.03	.01	.011	.05	.02	.008
Emotion regulation ability x	-.06	.04	.121									
Surface acting												
Emotion regulation ability x	.07	.03	.012									
Deep acting												
<i>Between-level</i>												
Surface acting	-.52	.09	<.001	.37	.13	.004	-.18	.08	.037	.30	.13	.020
Deep acting	.14	.09	.108	-.12	.10	.220	-.06	.07	.390	.03	.10	.764
Affective well-being				.37	.16	.023	.17	.11	.103	.33	.16	.046
Indirect effect surface acting				-.19	.09	.037	-.09	.06	.117	-.17	.09	.062
Indirect effect deep acting				.05	.04	.194	.02	.02	.255	.04	.04	.214
Trait affective well-being				.30	.14	.034	.26	.09	.007	.19	.14	.177
Gender				.64	.25	.010	-.40	.17	.018	.21	.25	.406
Age				-.01	.01	.383	.02	.01	.011	-.02	.01	.054

Note. Fixed unstandardized effects are shown for 441 observations nested in 103 individuals.

With regard to the influence of affective well-being on our outcome variables, employees who experienced a higher level of affective well-being also provided higher ratings on their levels of creativity ($b = .32; p < .001$), in-role performance ($b = .31; p < .001$), and extra-role performance ($b = .43; p < .001$), which fully supported Hypothesis 3.

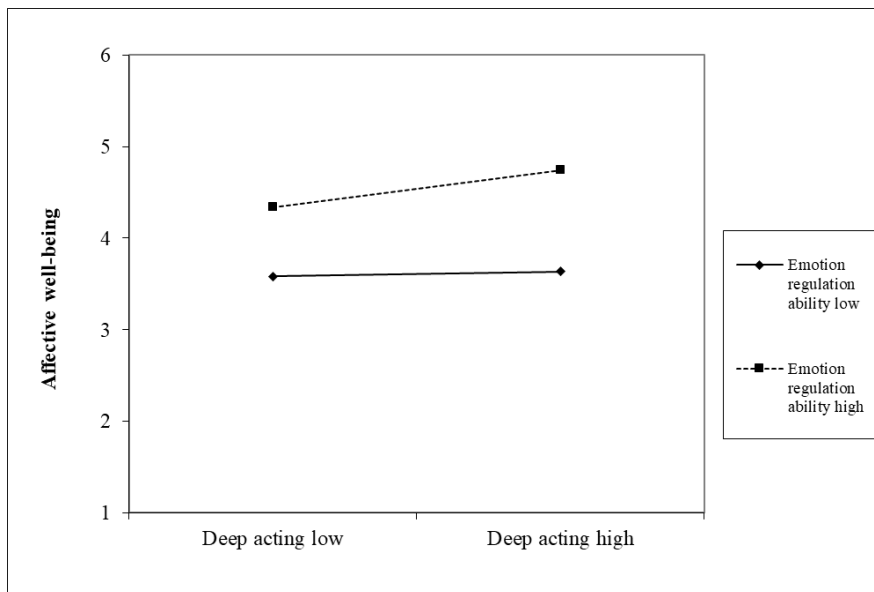
Mediating mechanisms of affective well-being were hypothesized in Hypothesis 4 and Hypothesis 5, respectively, and our results show that the relationships between both deep acting and surface acting and our outcomes variables were indeed mediated by affective well-being, thereby supporting both Hypothesis 4 and Hypothesis 5. Specifically, we found negative indirect effects between surface acting and creativity ($b = -.06; p = .002$), in-role performance ($b = -.06; p = .002$), and extra-role performance ($b = -.08; p = .001$). With regard to deep acting, we found positive indirect effects on creativity ($b = .04; p = .012$), in-role performance ($b = .03; p = .011$), and extra-role performance ($b = .05; p = .008$).

Finally, we analyzed the moderating influence of emotion regulation ability on the relationship between daily deep and surface acting and affective well-being. Our results show that emotion regulation ability significantly influenced the relationship between deep acting and affective well-being ($b = .07; p = .012$), which is visualized in **Figure 4-2**. However, emotion regulation ability did not significantly interact with surface acting. Therefore, Hypothesis 6a was supported, while Hypothesis 6b was not supported.

4.4.2 Additional between-person level analyses

Although not initially hypothesized, we also analyzed between-level results of our diary study (see **Table 4-2**). Contrary to the results of the within-person level relationship between emotion regulation and our outcome variables, there were significant between-level direct effects between surface acting and our outcome variables.

Figure 4-2: Interaction between deep acting and emotion regulation ability predicting affective well-being



Results show that—as one could expect on the basis of the argumentation of the emotional labor literature (Grandey & Gabriel, 2015)—between-level surface acting negatively influenced affective well-being ($b = -.52; p < .001$) and in-role performance ($b = -.18; p = .037$). However, surprisingly, between-level surface acting positively influenced creativity ($b = .37; p = .004$) and extra-role performance ($b = .30; p = .020$). This indicates that emotion regulation strategies between persons influence affective well-being and in-role performance rather differently than creativity and extra-role performance. We discuss potential explanations for these findings in the discussion section.

4.5 Discussion

While emotion regulation research so far predominantly focused on the impact of emotion regulation on health, job satisfaction, and working behaviors in the service context, the effects of emotion regulation on employees' creativity and performance at work within an organizational context remained largely underexplored (Batchelor et al., 2018; Grandey & Melloy, 2017). This diary study provides insights into these relationships by utilizing the

specific context of employees who work in small firms by examining the impact of emotion regulation—both on an ability as well as a strategy level—on creativity, in-role performance, and extra-role performance. We extend existing knowledge by showing that surface acting had harmful effects on daily creativity and performance on the within-level, mediated by daily affective well-being. Daily deep acting, on the other hand, positively influenced our outcomes. Furthermore, emotion regulation ability moderated the relationship between deep acting and affective well-being, but not between surface acting and affective well-being. Additional analyses on the between-level showed a *positive* effect of surface acting on creativity and extra-role performance.

4.5.1 Theoretical implications

First, we followed a daily diary approach to extend the limited knowledge on how daily deep acting and surface acting influence daily behavioral outcomes in the organizational context. We show that deep and surface acting had an indirect effect on employees' creativity and performance and that affective well-being mediated these relationships. Only few studies have studied the impact of daily emotion regulation strategies so far, specifically in the organizational context, and they brought forth inconsistent findings of the effects of those two strategies on potential behavioral outcomes (e.g., Judge et al., 2009; Lennard et al., 2019; Scott & Barnes, 2011; Trougakos et al., 2015; van Gelderen et al., 2017). Our results regarding the impact on creativity and performance confirm the theoretical assumptions of COR theory and existing—mostly cross-sectional—studies that assigned negative outcomes to surface acting (Grandey & Melloy, 2017; Hülsheger & Schewe, 2011). Moreover, we further clarify the unresolved role of daily deep acting, which showed inconsistent results in past research, and which, in our study, revealed a positive indirect impact on creativity and performance. Hence, in sum, our results confirm past research that assigned surface acting more negative outcomes than deep acting, and they give insights into the role of daily deep

acting, which has shown inconsistent results in past studies (Grandey & Melloy, 2017; Hobfoll, 1989; Hülshager & Schewe, 2011). Our approach also offers new insights into creativity as a daily changing behavior, rather than the stable trait conception utilized in the majority of previous research (Weinberger et al., 2018).

Second, our results shed light on the influencing factor of affective well-being as a mediating mechanism for creativity and performance. While deep acting positively influenced affective well-being, surface acting had a negative impact, and affective well-being in turn positively influenced creativity and performance. With regard to indirect effects, deep acting had a positive indirect effect on our outcomes, while surface acting had a negative indirect effect. Whereas we found no direct effects on our outcome variables on the daily within-person level, our *between*-person level results showed that surface acting was directly related to increased creativity and extra-role performance—as behavioral indicators that go beyond regular role expectations (Janssen, 2000)—as well as decreased in-role performance. A potential explanation for these unexpected results on the between-person level could be that surface acting as a superficial strategy to regulate emotions generally saves resources for more strenuous tasks that are not part of in-role behavior, as employees do not fully engage with their negative emotions and are hence generally able to engage in creative and extra-role behaviors. When it comes to in-role performance, this between-level effect is reversed, as surface acting is apparently perceived as disturbing with regard to the completion of regular tasks at work. Nonetheless, when taking the bigger picture with the mediator affective well-being into account, a different picture emerged, and surface acting had—analogue to the within-person results—harmful implications for creativity on the between-person level. Deep acting, however, had no direct effects on both within- and between-person levels, which once again provides further insights into the literature on deep acting that has already

acknowledged the unresolved nature of deep acting for employees' health, job satisfaction and performance (Grandey & Melloy, 2017).

By shedding light on the antecedents of affective well-being (i.e., the process of emotion regulation as a daily phenomenon at work), we add to existing literature that investigated the link between emotions and subsequent behaviors by focusing on the effects of positive or negative emotions at work without including emotion *regulation* components (e.g., Amabile et al., 2005; Chi et al., 2015; George & Zhou, 2002; Rispens & Demerouti, 2016; To et al., 2015). Our results underline that the regulation component of emotions plays a crucial role as an antecedent of affective well-being, which in turn fuels positive employee behavior at work.

Third, we examined the role of general emotion regulation ability as a moderator for the link between daily deep and surface acting and affective well-being. Our results show that emotion regulation ability only acted as a moderator for the effect of deep acting on affective well-being, but not for surface acting. This means that employees who perceive themselves as having higher emotion regulation ability—as an indicator of being able to deal with stressful situations (Brackett et al., 2006)—experience an even higher positive effect on well-being. This further underlines the importance of emotion regulation ability: A possible explanation for this moderating effect is that employees with higher emotion regulation ability may feel more successful in aligning their felt emotions with their displayed emotions through deep acting, thereby feeling more authentic in their emotional expressions (Grandey et al., 2005; Hülshager & Schewe, 2011). This alignment leads to even greater improvements in their affective well-being.

While emotion regulation ability strengthened the effect of deep acting on affective well-being, it did not influence the effect of surface acting on affective well-being. Hence, even if employees perceive themselves as having a high emotion regulation ability, the use of

surface acting will still have negative effects on their affective well-being. These results provide further information with regard to previous inconsistent study results on deep acting and the impact of emotion regulation ability, and they also further underscore the already empirically validated harmful role of surface acting (Grandey & Melloy, 2017; Hülshager & Schewe, 2011).

4.5.2 Practical implications

From a practical perspective, our results provide further insights into how employees should deal with emotions that arise during interpersonal interactions (Grandey & Gabriel, 2015). Particularly in the working context, emotions do not just “come and go”—instead, they are constantly being regulated by employees (Grandey, 2000). Employees should avoid superficially concealing their emotions by surface acting, as this negatively affects affective well-being, which, in turn, has negative implications for outcomes that are key behaviors in small firms. Because small firms have limited resources by nature (Greene et al., 1997), emotion regulation strategies that, in turn, potentially consume resources (Hobfoll, 1989), should be perceived as a crucial factor for firm success.

Employees commonly regulate their emotions because they feel like they must regulate them in line with emotional display rules (Grandey, 2000). Although most small firms have no formal emotional display rules, there are commonly implicit rules that leaders (i.e., founders or other supervisors) demonstrate in front of others (Batchelor et al., 2018). Leaders are therefore key figures in exemplifying how to manage emotions, and they can (and should) provide informal guidelines for employees on how to handle unwelcome emotions. In particular, leaders who deal with their emotions openly may also lead to their employees’ less frequent use of inauthentic and harmful emotion regulation strategies (Grandey et al., 2005; Hülshager & Schewe, 2011), as employees may sense they can share their emotions openly as well.

4.5.3 Limitations and future research

While our daily diary approach is a suitable method for examining the daily impact of emotion regulation strategies on our affective and performance outcomes, this method has also limitations that provide potential avenues for future research.

First, we measured both independent and dependent variables within the same daily diary survey, which could be a source of common method bias (Podsakoff et al., 2003). Future research could conduct dyadic studies by integrating objective reports on daily employees' performance measures by supervisors. Thereby, scholars could also integrate a more dynamic and reciprocal nature of emotion regulation into their studies: As emotion regulation is an interpersonal construct, existing relationships between organizational members and mechanisms of emotional contagion (Barsade, 2002) could be influential factors in explaining effects on employees' daily behavior.

Second, employees reported their emotion regulation strategies at the end of the working day, thereby relying on their retrospective memories (Ohly et al., 2010). Although diary studies are generally seen as a reasonable method to decrease bias due to retrospective responses, multiple daily measurement times could increase validity even more (Ohly et al., 2010). For example, to increase the validity of responses, future research could use momentary assessment methods and send out reminders to participants at random time points throughout the working day (Beal & Weiss, 2003). Additionally, this could improve the insights into the hypothesized mediation relationships. Although our mediation model was derived based on existing theories, the direction of relationships could be tested more robustly with multiple daily measurements.

Third, diary studies can be subject to unintended intervention effects, which means that by participating in a diary study, employees' perception of certain events at work that are part of the study may be influenced (Gochmann et al., 2022). Future research could vary the

abstraction levels of the retrospective reports of study variables to investigate whether an intervention effect will change the impact on outcome variables (Gochmann et al., 2022).

4.6 Conclusion

Our diary study offers new insights into how emotion regulation, both as a daily phenomenon at work as well as employees' general ability, influences crucial behaviors in small firms with limited organizational and human resources (Greene et al., 1997), namely employees' creativity, in-role performance, and extra-role performance. Our findings suggest that employees should avoid regulating their emotions superficially by surface acting to prevent detrimental day-level behavioral outcomes, while deep acting is an advisable strategy as it had positive indirect effects on creativity and performance. With our mediation model, we provide insights into affective well-being as a daily mediator for our studied outcome variables. In addition, our results reveal that general emotion regulation ability helps employees in handling emotions and stressful situations at work, as it moderated the impact of deep acting on affective well-being. Our findings emphasize the important role of emotion regulation, both as a strategy and an ability, for organizations. This suggests that leaders should educate and guide their employees "by example" to ascertain that employees know how best to maneuver through emotionally charged interactions at work.

5. Employees' daily sleep quality and emotion regulation at work⁴ (Essay IV)

Abstract

Previous research has primarily examined sleep quality as an outcome of emotion regulation strategies in the workplace. However, the role of sleep quality as a precursor to these strategies is not well understood. This study investigates the relationship between employees' daily sleep quality and their emotion regulation at work, and examines how sleep quality influences deep acting and surface acting as two distinct emotion regulation strategies. Data were collected with a one-week diary study, and findings reveal that better daily sleep quality enhances employees' daily emotion regulation ability at the within-person level. This improvement is associated with reduced daily surface acting, a form of emotion regulation involving the display of inauthentic emotions, known to negatively affect employee well-being and work behaviors. Conversely, sleep quality showed no significant within-person level effects on deep acting, a more authentic form of emotion regulation. Additionally, I found that perceived display rules moderate the impact of sleep quality on surface acting. This suggests that the influence of sleep quality on emotion regulation varies based on individuals' beliefs about appropriate emotional displays in the workplace.

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- 24th European Academy of Management Conference (EURAM), Bath, UK, June 25-28, 2024.
- 84th Annual Meeting of the Academy of Management (AOM), Chicago, USA, August 9-13, 2024.

5.1 Introduction

Emotion regulation is becoming increasingly important as a crucial influencing factor for well-being and health in the workplace (Gabriel et al., 2023). By effectively regulating their emotions, employees and leaders alike can not only reduce the impact of stress and negative emotions, but also improve interpersonal relationships through empathetic communication (Gabriel et al., 2020; Gagnon & Monties, 2023).

In the organizational context, there are two principal forms of emotion regulation: From an ability perspective, individuals are equipped with differing degrees of emotion regulation ability (Grandey & Gabriel, 2015; Mayer & Salovey, 1997; Scherer et al., 2020). From a strategy perspective, employees can regulate emotions at work by either deep acting or surface acting (Brotheridge & Lee, 2003; Grandey, 2000). Deep acting entails the deliberate approach to authentically experience desired emotions, whereas surface acting involves the superficial modulation of emotions without altering the underlying emotional state (Brotheridge & Lee, 2003; Grandey, 2000). Extant research shows that especially the superficial way of regulating emotions by surface acting can lead to emotional exhaustion, decreased job satisfaction, and impaired relationships (Gabriel et al., 2023; Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012). With regard to deep acting, findings are less clear, with mixed results on employee performance and health (Gabriel et al., 2023; Grandey & Melloy, 2017). While scholars have predominantly focused on these—potential adverse—consequences of emotion regulation so far, research on potential individual factors that influence both the ability to regulate emotions and the choice of strategies is limited (Grandey & Melloy, 2017). This is a surprising research void, as it is important to identify potential influencing factors that can decrease the use of harmful strategies, such as surface acting; and foster the use of more beneficial strategies, such as deep acting (Troth et al., 2018).

Scholars have predominantly studied emotion regulation ability and the use of strategies as stable character traits so far, however, emotion regulation can likewise change on a daily basis (Lavender et al., 2017). One crucial factor that may influence employees' daily behavior at work is the quality of their sleep (Barnes, 2012). Employees' sleep quality has already received attention in organizational behavior research for decades, as good sleep quality is a paramount factor for emotional well-being, which, in turn, positively impacts work-related performance and health outcomes (Barnes, 2012; Williamson et al., 2019). However, research on the relationship between sleep quality, employees' emotion regulation ability, and the use of emotion regulation strategies, is still in its infancy (Barnes, 2012; Guarana et al., 2021; Palmer & Alfano, 2017). The few existing studies have focused on the enactment of emotion regulation at work and its *impact* on sleep quality (Fouquereau et al., 2019; Gabriel et al., 2023; Wagner et al., 2014). These studies showed that especially surface acting has negative effects on sleep quality, because employees feel exhausted and not true to themselves when they are surface acting, creating strain that leads to impaired sleep (Fouquereau et al., 2019; Gu et al., 2020; Wagner et al., 2014; Yeh et al., 2020).

In contrast to this, this study explores the reverse effect of daily sleep quality on emotion regulation strategies deep acting and surface acting. I specifically focus on the daily use of these emotion regulation strategies, which, as I propose in this study, can be influenced by the impact of employees' daily sleep quality on their daily emotion regulation ability.

This study draws on the sleep and affect regulation model by Barnes (2012), who suggested, based on neuroscientific findings, that there is a relationship between sleep quality and self-regulation, which includes the regulation of emotions. In particular, the neuroscience literature suggests a link between sleep deprivation and prefrontal control in the brain, that involves the ability to meet emotional challenges (Yoo et al., 2007), and may therefore also influence emotion regulation at the workplace (Barnes, 2012; Barnes & Watson, 2019).

Specifically, better sleep is related to increased brain activity in the prefrontal cortex, which is responsible for impulse control and emotion regulation (Guarana et al., 2021; Walker & van Der Helm, 2009; Yoo et al., 2007), and which, in turn, might influence the use of emotion regulation strategies (Barnes, 2012).

As an additional influential factor, I explore the role of employees' perceived display rules (Diefendorff & Richard, 2003; Gabriel et al., 2023). Employees regulate their emotions at work according to perceived display rules, that is, their perception of (in-)formal guidelines on which emotions they should express in certain situations (Diefendorff & Richard, 2003; Gabriel et al., 2023). These display rules influence the enactment of emotion regulation strategies at work (Grandey, 2000; Hochschild, 1983), and could therefore also influence the relationship between sleep quality and the use of emotion regulation strategies.

The organizational context in this study encompasses small firms. This specific context was chosen for two reasons: First, those firms commonly consist of teams where employees work closely together (Wilkinson, 1999). Second, small firms typically have fewer (human) resources than larger firms (Greene et al., 1997). Hence, both emotion regulation ability and the use of beneficial emotion regulation strategies play a crucial role in such firms, as behaviors of employees not only have consequences for themselves, but also their immediate coworkers (Gabriel et al., 2023; Gabriel et al., 2020), and consequently, also impact the performance on the firm level (Grandey & Melloy, 2017). While previous research on deep acting and surface acting has primarily been conducted in service environments (Gabriel et al., 2023; Troth et al., 2018), small firms as a non-service context represent a unique research setting.

With this study, I contribute to the literature in the following ways. First, the findings of this one-week diary study ($n = 103$) shed light on the impact of sleep quality on emotion regulation, extending the existing body of research. Specifically, results reveal a novel

perspective on the interplay between sleep and emotion regulation (Gabriel et al., 2023), wherein sleep quality emerges as an indirect predictor of employees' use of surface acting (but not deep acting), a relationship that I find to be mediated by employees' daily emotion regulation ability. This adds to past research that has mainly focused on the reverse link between emotion regulation and sleep (Fouquereau et al., 2019; Gu et al., 2020; Wagner et al., 2014; Yeh et al., 2020).

Second, this study clarifies the relationship between emotion regulation ability and the use of different emotion regulation strategies. Despite repeated calls from scholars for a more integrated research approach that encompasses both emotion regulation as an ability and the utilization of different strategies, research exploring the connection between these two perspectives remains scarce (Gabriel et al., 2023; Grandey & Melloy, 2017). Rather than examining emotion regulation ability on a general level (i.e., as a personal disposition), this study focuses on the—so far understudied—daily changing emotion regulation ability (Lavender et al., 2017; Pavlacic et al., 2022) and its impact on the use of deep acting and surface acting. Results show that employee emotion regulation ability on a daily level acts as a mediator, and influences the use of surface acting, while there is no such link with deep acting.

Third, the role of display rules as an influencing factor with regard to the sleep-emotion regulation link is explored. Results show that employees who perceive their display rules as high, use more surface acting at work, than those with less strict display rules. Furthermore, perceived display rules moderate the relationship between sleep quality and surface acting, indicating that with higher display rules, the negative relationship between sleep quality and surface acting becomes more pronounced. That is, in contexts with higher display rules, better sleep quality leads to a stronger decrease in surface acting compared to contexts with less strict display rules. This further underlines the critical role of perceived

display rules in shaping employees' behavior at work (Gabriel et al., 2023; Grandey et al., 2015).

5.2 Theoretical background

5.2.1 Emotion regulation ability and strategies

On a broader competence level, individuals exhibit varying degrees of ability in emotion regulation (e.g., as a part of emotional intelligence) (Grandey & Melloy, 2017; Mayer & Salovey, 1997), which has already been demonstrated as being advantageous for a multitude of attitudinal and behavioral outcomes in the workplace (Miao et al., 2017). From a strategy perspective, employees use different emotion regulation strategies in work-related settings, particularly when confronted with the need to regulate their emotional expressions in response to negative emotions (Grandey & Gabriel, 2015).

With regard to the interconnection of the two emotion regulation perspectives—the ability and the strategy perspective—emotion regulation ability has already been shown to be related to the use of emotion regulation strategies (Grant, 2012; Mesmer-Magnus et al., 2012; Scherer et al., 2020), such that employees with a higher emotion regulation ability generally prefer deep acting as a more authentic emotion regulation strategy over surface acting as an inauthentic strategy (Grandey & Melloy, 2017; Mesmer-Magnus et al., 2012). However, as both emotion regulation ability and emotion regulation strategies can vary on a daily basis (Pavlacic et al., 2022; van Gelderen et al., 2017; Xanthopoulou et al., 2018), it is important to investigate how they interrelate on a daily level and which individual factors, such as daily sleep quality, impact this interrelation (Barnes, 2012).

5.2.2 Emotion regulation and sleep

In the model of sleep and self-regulation, Barnes (2012) proposed that there is a relationship between sleep and emotion regulation, assuming that poor sleep quality reduces an employee's energy and willingness to regulate emotions at work. Specifically, the model

suggests that sleep deprivation leads to a reduced ability to control emotions, which is attributed to the fact that poor sleep leads to diminished activity in the amygdala and the prefrontal cortex—brain regions that play a key role in the regulation of emotions (Beauregard et al., 2001; Ochsner et al., 2004). This, in turn, may influence the engagement in emotion regulation strategies (Barnes, 2012).

Previous studies on the relationship between emotion regulation and sleep quality have focused primarily on the effects of emotion regulation strategies on sleep. For example, studies have shown that the enactment of surface acting at work leads to insomnia at night (Fouquereau et al., 2019; Gu et al., 2020; Wagner et al., 2014; Yeh et al., 2020), while the effect of deep acting on sleep quality remains unclear so far (Yeh et al., 2020). The reason for the negative effects of surface acting on sleep is the inauthentic and thus exhausting nature of surface acting, which leads to strain and rumination after work and disrupts the recovery process at night (Gu et al., 2020).

With regard to the reverse relationship—the impact of sleep quality on emotion regulation strategies—knowledge is still limited. Initial evidence of the existence of this relationship is provided by Diestel et al. (2015), who showed that better sleep quality weakens the negative effect of surface acting on well-being. Similarly, another study found that better sleep quality weakens the negative influence of emotional dissonance (i.e., the underlying process of surface acting) on fatigue (Zhang et al., 2016). At the same time, besides these studies that examined sleep quality as a moderating influencing factor, there has been no study so far that examined the impact of daily sleep quality on both daily deep acting and surface acting as outcome variables.

Similarly, empirical evidence on the effect of sleep on emotion regulation ability is still in its infancy, but existing experimental studies have already shown that there is a link between the sleep quality on a given night and the subsequent emotion regulation ability: For

instance, in a laboratory experiment, Mauss et al. (2013) revealed that poor sleep decreases effective emotion regulation ability, which they explained with the negative impact of poor sleep on cognitive control, which is part of prefrontal functions. Similarly, in a meta-analysis, Guarana et al. (2021) showed that poor sleep has a negative relationship with self-control. Similar effects of poor sleep have been shown for decision-making abilities and memory functions, while the reverse effect has been proposed for good sleep quality (Guarana et al., 2021).

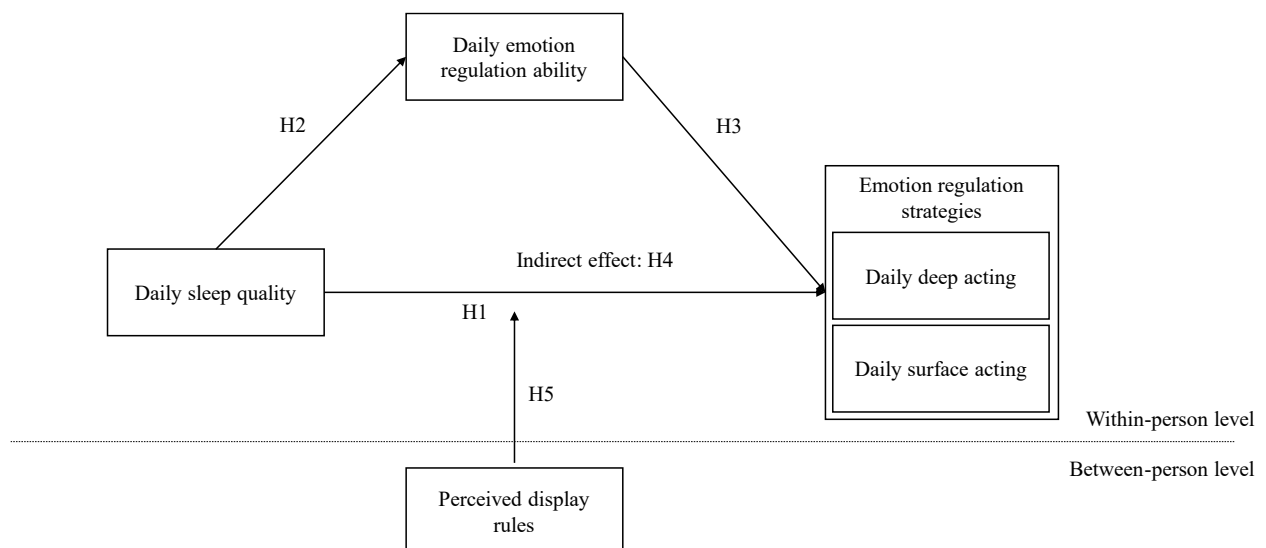
The model of sleep and self-regulation emphasizes the cognitive demands associated with emotion regulation (Barnes, 2012). Poor sleep quality may impair the cognitive resources required for effective emotion regulation of employees (Barnes, 2012; Barnes & Watson, 2019). Consequently, emotion regulation ability could be improved by a higher quality of sleep on a given day. This improvement is crucial, as emotion regulation ability could influence the selection of emotion regulation strategies (Grandey & Melloy, 2017; Grant, 2012; Mesmer-Magnus et al., 2012). The rationale behind this is that the use of emotion regulation strategies requires the availability of resources (Hülshager & Schewe, 2011; Sayre et al., 2021), and the availability of resources is directly influenced by sleep quality (Barber & Munz, 2011).

Based on these assumptions, this study explores the relationship between employees' daily sleep quality and emotion regulation ability at work, which may subsequently impact the use of the emotion regulation strategies deep acting and surface acting. Specifically, daily sleep quality may positively influence emotion regulation ability on a given day, which, in turn, may differently influence the use of either deep acting or surface acting as two distinct emotion regulation strategies. Additionally, I expect a moderating influence of employees' perception of display rules on the relationship between daily sleep quality and the engagement in emotion regulation strategies (see **Figure 5-1**), which will be outlined in more detail below.

5.2.3 Development of hypotheses

The use of deep acting and surface acting as two distinct forms of emotion regulation can vary on a daily level (van Gelderen et al., 2017), with strategies depending on employees' daily individual mental states and available cognitive resources (Hülshager & Schewe, 2011). Employees' daily sleep quality positively impacts employees' available cognitive resources on the daily level (Hur & Shin, 2023). This may positively influence the use of daily deep acting, which is a strategy that requires higher available resources that help employees to bring felt and displayed emotions in alignment (Brotheridge & Grandey, 2002; Grandey, 2000).

Figure 5-1: Conceptual research model



Therefore, employees who have a high level of available cognitive resources on a given day potentially resort to the regulation of emotions on a more profound level, which is represented by deep acting (Hülshager & Schewe, 2011). In contrast, employees who slept well may use less surface acting on a given day, as they may feel that they do not have to resort to this superficial and potentially inauthentic strategy (Grandey et al., 2005).

Conversely, employees who have a lower sleep quality and less cognitive resources on a

given day, may resort to more surface acting, as it could appear as a *faster* solution to regulate emotions on a superficial level (Moin et al., 2020).

In sum, employees with more cognitive resources and therefore more energy may regulate their emotions more on a profound level (with deep acting), and less on a superficial level (with surface acting) (Hülshager & Schewe, 2011; Totterdell & Holman, 2003). This leads to the following baseline hypothesis:

Hypothesis 1. *Employees' daily sleep quality positively influences daily deep acting and negatively influences daily surface acting.*

Sleep quality may also be an important predictor for emotion regulation ability (Mauss et al., 2013), and hence, a linking mechanism between daily sleep quality and the use of emotion regulation strategies deep acting and surface acting. Lack of sleep decreases the function of the amygdala and the prefrontal cortex, which are brain areas playing a crucial role in regulating emotions (Beauregard et al., 2001; Ochsner et al., 2004). Consequently, and following the assumptions of the model of sleep and self-regulation, employees suffering from poor sleep quality might find themselves struggling more with emotion regulation at work in the face of negative emotions (Barnes, 2012). This leads to the following hypothesis:

Hypothesis 2. *Employees' daily sleep quality positively influences employees' daily emotion regulation ability.*

Improved sleep correlates with increased prefrontal cortex activity, which is assumed to enhance emotion regulation (Barnes, 2012). As already described, daily sleep quality affects employees' available cognitive resources, which is manifested in their daily emotion regulation ability. For deep acting and surface acting, in turn, employees need different degrees of their emotion regulation ability, because surface acting requires more effort than deep acting for employees (Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012). Employees' cognitive resources are either maintained (by deep acting) or depleted (by surface

acting) (Grandey & Melloy, 2017). While deep acting is more likely to be chosen when emotion regulation capacity is high due to good sleep quality, surface acting is more likely to be chosen when sleep quality is low. Consequently, it can be expected that employees with a higher daily emotion regulation ability use less surface acting and more deep acting, because employees with a higher emotion regulation ability on a given day will try to retain their resources and prevent themselves from using surface acting as an inauthentic and resource-depleting strategy (Grandey & Melloy, 2017). Hence, based on these assumptions, there is reason to believe that the daily emotion regulation ability that is available to employees—influenced by daily sleep quality—impacts the degree of employees using deep acting and surface acting, which leads to the following hypotheses:

Hypothesis 3. *Employees' daily emotion regulation ability a) positively influences daily deep acting and b) negatively influences daily surface acting.*

Hypothesis 4. *Employees' daily emotion regulation ability mediates the relationship between daily sleep quality and daily (a) deep acting and (b) surface acting.*

While this study proposes the dependency of the engagement in emotion regulation strategies on individual sleep quality, and, in turn, the level of daily emotion regulation ability, there are further influencing factors on the organizational level that could influence the use of emotion regulation strategies. One factor in the literature that is repeatedly seen as an influencing factor is the existence of perceived display rules (Grandey & Melloy, 2017; Hochschild, 1983). Display rules refer to an individual's belief about which emotions are appropriate to express in a given situation (Brotheridge & Lee, 2003; Diefendorff & Richard, 2003), namely, that employees try to either suppress their negative emotions by surface acting or try to change their emotions into more positive emotions by deep acting (Grandey & Melloy, 2017). Display rules can be therefore seen as a trait-level construct that depends on employees' own perceptions of how they should behave at their workplace by employing

different emotion regulation strategies (Brotheridge & Lee, 2003; Diefendorff et al., 2005).

Hence, it is possible that generally perceived display rules influence the extent to which sleep quality affects the implementation of emotion regulation strategies, which leads to the following hypothesis:

***Hypothesis 5.** The relationship between employees' daily sleep quality and daily deep and surface acting is moderated by employees' perceived display rules.*

5.3 Method

5.3.1 Sample

To measure the hypothesized relationships, a daily diary study spanning six consecutive working days from Monday to Monday (i.e., the weekend was excluded) was conducted. The data analyzed in this research were part of a larger study on daily emotional experiences in the working context, which was conducted in the context of small firms with fewer than 50 employees. This research context was chosen as both emotion regulation ability and the use of beneficial emotion regulation strategies of employees in small firms is crucial for their performance at work, and ultimately also influences the work atmosphere among close-knit teams through interpersonal effects of emotion regulation (e.g., by either leading to positive or negative reactions by observers) (Gabriel et al., 2020; Wilkinson, 1999). This, in turn, potentially impacts overall small firm performance (Barnes & Watson, 2019).

For the recruitment of the research sample, a European ISO-certified online sampling provider (ISO 20252:2019) was employed for both sample recruitment and survey hosting. The study comprised 103 German-speaking individuals, with a total of 441 daily survey responses. The age range of participants spanned from 19 to 68 years, with a mean age of 47.30 years ($SD = 12.46$), and included 53.74% females. On average, participants reported a tenure of 10.71 years ($SD = 9.36$) within their respective organizations, and an average workforce size of 15.64 employees ($SD = 23.31$).

5.3.2 Procedure

Prospective participants were invited by the sample provider to participate in the study, framed as a work-related diary study, with the incentive of earning virtual points that could later be redeemed as vouchers. Participants were queried about their availability in the forthcoming week, and those indicating unavailability were excluded from participation.

The baseline questionnaire encompassed various between-person variables such as demographic characteristics as well as the measurement of general perceived display rules. On the subsequent Monday, participants received daily email invitations at 5 p.m., prompting their involvement in the daily diary study. Before gaining access to the daily diary survey, participants were required to confirm that they had worked on that respective day, and were otherwise screened out. Participants were granted until midnight on the same day to complete their daily responses, ensuring the accuracy of the information gathered. To assess data quality, one daily attention check was incorporated, employing the instruction “For this item, please select strongly agree” (Barber et al., 2013).

Initially, responses from 160 participants were collected. Sixteen participants failed one or more daily attention checks, resulting in their exclusion for the respective day, while 23 participants participated in the daily diary study for fewer than three days. An additional 62 observations were excluded because participants reported non-workdays in the daily surveys. These exclusion criteria led to a dataset of 441 observations from 103 participants who participated in the daily diary study for three or more days.

5.3.3 Measures

Descriptive statistics, including means, *SDs*, and correlations are shown in **Table 5-1**. All items that were used in this study were adapted for daily measurement and used a seven-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Table 5-1: Descriptive statistics

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
Level 1 (Within-person)									
1. Sleep quality	5.05	1.31	—	-.16	-.06	.08			
2. Emotion regulation ability	6.20	.95	.45	—	-.28	.01			
3. Surface acting	2.21	1.37	-.44	-.64	—	-.01			
4. Deep acting	3.19	1.53	-.10	-.24	.22	—			
Level 2 (Between-person)									
5. Display rules	4.69	1.56	-.14	-.26	.24	.31	—		
6. Gender	.46	.50	.18	.08	-.17	.03	-.40	—	
7. Age	47.30	12.46	.01	.16	-.11	-.22	-.18	.07	—

Note. Level 1, $n = 441$; Level 2, $n = 103$. Gender (0 = female, 1 = male). Within-person correlations are shown above the diagonal, between-person variables are shown below the diagonal. All correlations above $|.10|$ are significant at $p < .05$. All correlations above $|.13|$ are significant at $p < .01$.

Daily sleep quality was measured with one item based on a scale by Buysse et al. (1989), which was adapted for the use in this diary study. Participants were asked “How would you rate your sleep quality last night?”. Past research has shown that a one-item measure is suitable for the assessment of subjective sleep quality (Snyder et al., 2018).

Daily emotion regulation ability was measured with the three items “Today I had the feeling that I was not in control of my emotions,” “Today I had difficulty controlling my behavior,” and “Today I had difficulty doing the things I needed to do” based on a scale by Lavender et al. (2017). Because the hypothesized relationships included the examination of emotion regulation *ability*, rather than emotion regulation *inability* as in the original scale, I reverse-coded all three items. Hence, in the descriptive and statistical analysis of this study, results for the daily emotion regulation *ability*, rather than the *inability* are displayed. Average day-level Cronbach’s alpha of this scale was .76.

Daily deep acting and *surface acting* were measured with six items from the Emotional Labour Scale developed by Brotheridge and Lee (2003). Items for deep acting were “Today, at work, I tried hard to actually feel the feelings I needed to show in front of others,” “Today, at work, I tried to really feel the emotions I showed,” and “Today, at work, I tried to actually feel the emotions I had to show in front of others.” Average day-level Cronbach’s alpha was .91. Items for surface acting were “Today, at work, I pretended to have emotions in front of others that I didn’t really have,” “Today, at work, I hid my true feelings about a situation from others,” and “Today, at work, I tried not to express my true feelings in front of others.” Average day-level Cronbach’s alpha was .91.

Perceived display rules were measured in the basis survey with four items taken from Diefendorff et al. (2005). Items were “In my workplace, I am expected to express positive emotions toward others as part of my job,” “My organization expects me to try to be enthusiastic and excited when interacting with others,” “I am expected to suppress my bad

moods or negative reactions at work,” and “My organization expects me to try to pretend that I am not upset or worried when I actually am.” Cronbach’s alpha for this scale was .89.

5.3.4 Analytical strategy

The hierarchical nature of the data, wherein daily responses were nested within individuals, necessitated a multilevel analysis that accounted for the interdependence between observations at both the between-person and within-person levels (Bolger & Laurenceau, 2013). The trait variable *perceived display rules*, assessed during the basis survey, was classified as second-level (between-person) data, whereas the data collected from the daily survey, such as daily sleep quality, were classified as first-level (within-person) data (Bolger & Laurenceau, 2013; Ohly et al., 2010).

I conducted the multilevel mediation analyses with the package *lavaan* (Rosseel, 2012) in R (R Core Team, 2022). First, to examine within-person and between-person variances, I calculated intraclass correlations (ICCs) (Tomczyk et al., 2022). Analyses of the dependent variables showed that 53.6% of the variance in emotion regulation ability was between-person (i.e., 46.4% of the variance was within-person), 67.6% of the variance in surface acting was between-person (i.e., 32.4% of the variance was within-person), and 63.7% of deep acting was between-person (i.e., 36.3% of the variance was within-person).

In diary studies, in order to minimize confounding effects between levels, it is recommended to center daily independent variables at the group mean (Bolger & Laurenceau, 2013). Conversely, variables at the between-person level should be centered at the grand mean (Bolger & Laurenceau, 2013), which is automatically handled by the *lavaan* package (Preacher et al., 2010).

5.4 Results

Table 5-2 depicts the results of the multilevel analyses. No direct effects of sleep quality on emotion regulation strategies surface acting and deep acting were found on the

within-person level, thereby rejecting Hypothesis 1. With regard to Hypothesis 2, employees' daily sleep quality positively influenced employees' emotion regulation ability ($b = .12$; $p = .004$). Therefore, Hypothesis 2 was supported.

With regard to the influence of emotion regulation ability on emotion regulation strategies, emotion regulation ability negatively influenced surface acting ($b = -.30$; $p < .001$), but not deep acting, supporting Hypothesis 3b, but not 3a. Furthermore, I found indirect effects between sleep quality and surface acting ($b = -.04$; $p = .012$), but not deep acting. This supported Hypothesis 4b, but not 4a.

Concerning the moderating influence of perceived display rules on the relationship between sleep quality and emotion regulation strategies, perceived display rules significantly influenced the relationship between sleep quality and surface acting ($b = -.11$; $p = .021$), but not deep acting. The moderating effect is visualized in **Figure 5-2**. Therefore, Hypothesis 5 was partially supported with regard to surface acting, but not with regard to deep acting.

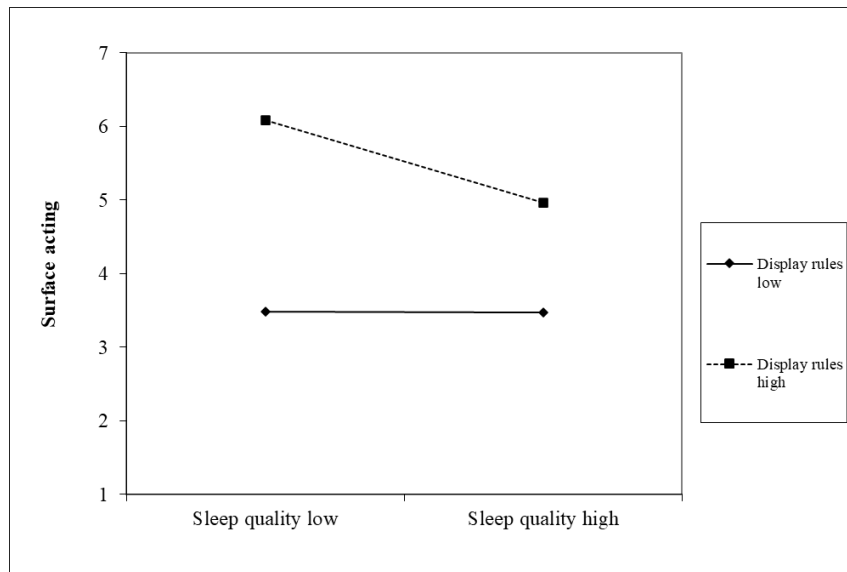
Although not hypothesized, the between-person level results give further insights into the investigated relationships. As displayed in **Table 5-2**, on the between-person level, there is also a significant effect with respect to the indirect effect of sleep quality on surface acting. This suggests that individuals with consistently better sleep quality tend to have better emotion regulation ability, which, in turn, reduces their surface acting. Surprisingly, I also found a significant between-level indirect effect of sleep quality on deep acting, indicating that higher sleep quality also reduces deep acting. However, when comparing the indirect effects of sleep quality on the engagement in emotion regulation strategies, the decrease in surface acting ($b = -.33$; $p < .001$) is stronger than the decrease in deep acting ($b = -.17$; $p = .046$), indicating that sleep quality on the between-person level has a stronger diminishing effect on surface acting.

Table 5-2: Multilevel results

	Emotion regulation ability (Mediator)			Surface acting (Dependent variable)			Deep acting (Dependent variable)		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
<i>Within-person level effects</i>									
Sleep quality	.12	.04	.004	-.02	.05	.711	.08	.06	.140
Emotion regulation ability				-.30	.06	<.001	-.04	.07	.616
Indirect effect sleep quality				-.04	.02	.012	-.01	.01	.621
Sleep quality x Display rules				-.11	.05	.021	.04	.07	.604
<i>Between-person level effects</i>									
Sleep quality	.36	.08	<.001	-.18	.11	.097	.04	.16	.787
Emotion regulation ability				-.91	.15	<.001	-.48	.22	.029
Indirect effect sleep quality				-.33	.09	<.001	-.17	.09	.046
Gender	-.03	.17	.865	-.29	.21	.170	.23	.30	.444
Age	.01	.01	.098	-.01	.01	.871	-.03	.02	.037

Note. Fixed unstandardized effects are shown for 441 observations nested in 103 individuals.

Figure 5-2: Visualization of the interaction between sleep quality and display rules predicting surface acting



5.5 Discussion

The findings of this diary study revealed that employees' daily sleep quality was associated with a higher daily emotion regulation ability, which in turn negatively influenced the use of daily surface acting at work. Perceived display rules had a moderating effect on the relationship between sleep quality and surface acting. Such effects were not found for deep acting on the within-person level—however, significant indirect effects between sleep quality and both surface acting and deep acting were found on the between-person level. The results have multiple implications for theory and practice.

5.5.1 Implications for theory

First, while existing studies on the relationship between sleep and emotion regulation have specifically examined the influence of emotion regulation on sleep (Gabriel et al., 2023; Wagner et al., 2014), this study takes the reverse perspective and focuses on employees' sleep quality as an antecedent of emotion regulation. More specifically, the influence of sleep quality on emotion regulation ability was explored, which in turn showed to be influencing emotion regulation strategy use. Thus, this study goes a step further than previous studies that

have examined either only the relationship between sleep quality and emotion regulation ability (Mauss et al., 2013), or the relationship between emotion regulation ability and emotion regulation strategies (Gabriel et al., 2023; Grant, 2012; Scherer et al., 2020). The results of this diary study partly confirm the hypothesized assumptions, as it is shown that higher daily sleep quality leads to higher daily emotion regulation ability, which in turn leads to less use of daily surface acting as an emotion regulation strategy. This conversely means that employees who sleep worse on a given day have a poorer emotion regulation ability and are therefore more likely to choose surface acting. Hence, this study shows that sleep quality is an important component in predicting surface acting. This finding presents a significant challenge for firms, as employees who engage in extensive surface acting within the workplace exhibit diminished performance, job satisfaction, and well-being (Gabriel et al., 2023; Hülshager & Schewe, 2011).

Remarkably, I found no relationships between daily sleep quality, emotion regulation ability, and deep acting on the within-person level. An explanation for this could be that deep acting, as the effort to actually create the emotions that need to be expressed (Grandey & Gabriel, 2015), may be influenced by factors beyond daily fluctuations in emotion regulation ability. For example, deep acting may be influenced by long-term emotional competencies, which could explain the lack of a significant effect in this daily diary study.

At the same time, I found a between-person level effect of this relationship, that is, sleep quality negatively influenced deep acting, mediated by emotion regulation ability on the between-person level. This finding is in line with the aforementioned assumption that deep acting is less subject to daily influential factors and is therefore probably more dependent on learned emotion regulation strategy skills. The finding of an equally negative indirect effect of sleep quality on surface acting at the between-person level suggests that individuals who generally have better sleep quality tend to engage less in *both* deep acting and surface acting.

However, the reduction in surface acting at the between-person level due to higher sleep quality was more pronounced than the reduction in deep acting. This is consistent with the within-person level results, which showed that the increased resources from higher sleep quality led to a decrease in surface acting among employees.

The finding that higher sleep quality reduced both deep acting and surface acting on the between-person level could mean that employees rather resort to more authentic behaviors at work, and express their genuine emotions (Glomb & Tews, 2004) when they have slept well. Since scholars see the display of genuine, authentic emotions as a potential enhancer of employee performance at work (Diefendorff et al., 2005; Gabriel et al., 2023), this is an important finding for both theory and practice. Organizations should implement measures to increase employees' sleep quality (e.g., flexible working hours), as sleep quality could reduce potentially effortful and inauthentic emotion regulation strategies (Gabriel et al., 2023; Grandey & Melloy, 2017). While this particularly applies to surface acting, deep acting can also be demanding for employees and may appear inauthentic to others if employees' true emotions unintentionally shine through (Grandey & Melloy, 2017).

These findings also emphasize that emotion regulation is a multifaceted construct from the strategy perspective, and it raises the question of the meaning of deep acting, its antecedents and its consequences in the working context. Many studies have found no or mixed findings regarding the *consequences* of deep acting on well-being or performance (Gabriel et al., 2023; Hülshager & Schewe, 2011). Now that this study also finds no results regarding the studied *antecedents* (i.e., sleep quality and emotion regulation ability) of deep acting on the within-person level, this underscores that deep acting as a construct needs to be better understood and the mechanisms leading to these unclear results need to be further explored.

Second, this study highlights the linking role of daily emotion regulation ability between daily sleep quality and employees' use of the emotion regulation strategy surface acting. As the results show, there is a negative indirect effect of employees' daily sleep quality on surface acting, meaning that employees who ranked their day-level sleep quality as high, also reported less daily surface acting at work, mediated by their daily emotion regulation ability. While previous studies either focused on the relationship between sleep and emotion regulation ability (Mauss et al., 2013), or the relationship between the general emotion regulation ability and surface acting (Gabriel et al., 2023; Grant, 2012; Scherer et al., 2020), the link between all three variables on the day-level has not been researched so far. Hence, this study extends previous research and underlines that not only should employees avoid surface acting—as implicated by extant research that pointed out the negative consequences of this strategy (Gabriel et al., 2023; Grandey & Melloy, 2017; Hülshager & Schewe, 2011)—but that it is important to tackle the problem earlier, that is, to improve employees' sleep quality, and thereby their daily emotion regulation ability. This could prevent employees from engaging in surface acting in the first instance—and thereby avoiding the negative consequences that come with it (Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012).

The findings of this diary study also shed light on the perspective of emotion regulation ability as a daily changing factor, rather than a stable trait-view as in past research on emotion regulation (Grandey & Melloy, 2017; Pavlacic et al., 2022). The findings implicate that emotion regulation ability is a characteristic that is changeable and fluctuating, which means that it is also possible for employees to develop this ability further (Gabriel et al., 2023).

Third, this study entailed the exploration of the role of perceived display rules as an additional influencing factor for the relationship between sleep quality and use of emotion

regulation strategies. The results suggest that individuals with stronger adherence to display rules may be more compelled to use surface acting. The moderator effect (see **Figure 5-2**) suggests that when perceived display rules are high (i.e., with stricter display rules), the negative relationship between sleep quality and surface acting becomes more pronounced. That means, in contexts with higher perceived display rules, better sleep quality leads to a stronger decrease in surface acting compared to contexts with less strict display rules. Hence, employees' sleep quality is especially important in environments where display rules are perceived as high. In contrast, in contexts where display rules are perceived as low, the impact of sleep quality on surface acting seems to have no such effect.

5.5.2 Implications for practice

For organizations, the findings of this study have multiple implications. Improving employees' sleep quality and their emotion regulation ability is not only beneficial for employees' own performance at work, but also for the productivity and overall success of an organization (Barnes & Watson, 2019). Hence, organizations should take measures to support employees' sleep quality and enhance their emotion regulation ability, which could include promoting regular breaks and offering (mental) health support as well as work arrangements that match employees' sleep chronotypes (Kühnel et al., 2020). The findings of this study are especially crucial in the research context that was chosen for this study, namely, the small firm context. As small firms are commonly dependent on each employee's performance (Andries & Czarnitzki, 2014), the role of their sleep quality and its impact on how employees manage their emotions at work may be a critical resource for overall firm performance. From a leadership perspective, this implicates that supervisors should be receptive to their subordinates' work-related or non-work-related difficulties and should be supportive in addressing them. Additionally, small firms could offer training programs that place an

emphasis on employee well-being and protecting cognitive resources by improving employees' sleep and emotion regulation ability.

With regard to the analysis of the influential role of perceived display rules for surface acting, the results indicate that employees who feel that they are subject to stronger display rules resort to more surface acting than employees with less display rules. Moreover, the moderating effect suggested that sleep quality is even more important when employees perceive their display rules at work as high. This in turn opens the discussion about the meaningfulness of display rules. While display rules can make sense in certain situations to create a framework for action, in other situations they are harmful because they promote surface acting (Grandey et al., 2015). To create an authentic and healthy work environment, firms should try to convey to their employees that display rules do not implicate the use of excessive surface acting to avoid long-term harmful consequences on well-being and performance, that also potentially impact the overall firm performance (Gabriel et al., 2023; Grandey & Melloy, 2017).

5.5.3 Limitations and future research

This study has limitations, which in turn offer opportunities for future research. First, in the diary survey, both independent and dependent variables were measured simultaneously, which could lead to common method bias, as Podsakoff et al. (2003) pointed out. In future research, it would also be beneficial to conduct dyadic studies that incorporate objective performance assessments by coworkers or supervisors with regard to the outcome variable surface acting. This approach would allow for a more comprehensive examination of the dynamic and reciprocal nature of emotion regulation.

Second, participants reported their retrospective experiences of the day at the end of the working day. Incorporating multiple daily measurement points could further enhance the validity of the findings, as suggested by Ohly et al. (2010).

Third, this daily diary study did not include questions designed to interrogate contextual variables or specific types of interactions, which in turn might also influence the use of emotion regulation strategies at the daily level. Future research could hence design more fine-grained questionnaires that capture additional specific variables that might influence the sleep-emotion regulation link.

Fourth, this study considers sleep quality as a precursor to emotion regulation, both at the ability and strategy levels—whereas previous research has predominantly focused on the opposite effect of emotion regulation on sleep quality (Fouquereau et al., 2019; Gabriel et al., 2023; Wagner et al., 2014). Future research may therefore benefit from longitudinal studies to gain more insights into the direction of this relationship, as the studied variables may influence each other over time.

5.6 Conclusion

This study extends research on sleep and emotion regulation by investigating the link between daily sleep quality and the subsequent effect on emotion regulation, both on an ability and a strategy level. This adds to previous studies that studied the reverse link: The impact of emotion regulation—specifically surface acting as a rather harmful strategy—on sleep quality (Fouquereau et al., 2019; Gabriel et al., 2023; Wagner et al., 2014). The results of this study underline the importance of sleep quality on the daily emotion regulation ability and the subsequent decreased use of surface acting at work, which suggests that firms should provide training programs and incite supervisors to bear employees' work-related and non-work-related difficulties in mind that might affect sleep quality. This, in turn, is vital to improve employee emotion regulation ability and to avoid surface acting so that job performance and employee well-being do not decline in the long term (Gabriel et al., 2023).

6. Conclusion of the dissertation

To address the overarching research question “*What are the antecedents and consequences of emotion regulation strategies in entrepreneurial, young, and small firms, and how does emotion regulation ability contribute to this?*”, this dissertation presented four essays. In the following, I will summarize the research findings and discuss their theoretical and practical implications. Subsequently, I will outline the limitations of this dissertation and suggest potential avenues for future research.

6.1 Summary of research findings

Essay I provided an overview of the literature on emotion regulation, emotional intelligence, and emotion-focused coping in the entrepreneurial context with a systematic integrative review (Cronin & George, 2020). Using the umbrella term “emotion management” (Olson et al., 2019; Peña-Sarrionandia et al., 2015), this review highlighted how entrepreneurs can manage their emotions to improve their well-being and performance. The resulting framework classified the literature into emotion management as an individual ability and as strategies (i.e., the use of strategies as a trait and as situation-specific responses), also noting the macro- and meso-level factors, individual factors, antecedents, and consequences. The review suggests that future research should explore how different perspectives of entrepreneurial emotion management interrelate and extend the current understanding of managed emotions, organizational predispositions, and outcomes, including the negative aspects and interpersonal dynamics of entrepreneurial emotion management.

Essay II explored which emotional display strategy leaders should employ in a young firm’s crisis situation when interacting with employees. With an experimental vignette study using the EASI model (van Kleef, 2009), employee reactions to a leader employing deep acting, surface acting, or displaying genuine fear were compared. Results showed that surface acting by a leader increased employees’ negative emotions, while deep acting reduced them.

Surface acting had a negative impact on job engagement and affective commitment, mediated through employees' emotional reactions, whereas deep acting showed no significant differences compared to genuine emotions regarding these outcomes. The study suggests that leaders in crisis situations may benefit from showing fear rather than using potentially inauthentic emotion regulation strategies.

Essay III investigated how employees' daily emotion regulation strategies (i.e., deep acting and surface acting) impact creativity and performance at their work in small firms, considering the influencing role of general emotion regulation ability. Based on COR theory (Hobfoll, 1989), the one-week diary study showed that daily surface acting had a negative impact on creativity and performance through affective well-being, while daily deep acting had positive effects. Additionally, the study found that the impact of deep acting on affective well-being was influenced by employees' general emotion regulation ability.

Essay IV analyzed how employees' daily sleep quality affects their daily emotion regulation ability and the utilization of emotion regulation strategies (i.e., deep acting and surface acting) at work. Based on the model of sleep and self-regulation (Barnes, 2012), the results of a one-week diary study showed that improved sleep quality enhanced daily emotion regulation ability, resulting in reduced surface acting. Notably, sleep quality did not significantly affect deep acting. Furthermore, the study showed that the relationship between sleep quality and surface acting was moderated by employees' perceptions of display rules, which implicates that sleep quality is particularly important for individuals who perceive that they have higher display rules at work.

6.2 Theoretical implications of the dissertation

6.2.1 Exploring consequences and antecedents of emotion regulation

This dissertation investigated unique consequences and antecedents of emotion regulation strategies relevant to the non-service organizational contexts of entrepreneurial,

young, and small firms. As a starting point for this dissertation, Essay I delineated these specific antecedents (e.g., uncertainty, crises), and consequences of entrepreneurial emotion management (e.g., well-being, performance), thereby shaping the contexts and variables in the subsequent studies in this dissertation. The review also introduced a notable distinction from the extant service literature on emotion regulation: Entrepreneurial scholars predominantly view emotion regulation as a positive element for entrepreneurial well-being and performance (Cole et al., 2018), diverging from the traditional perspective in service settings where emotion regulation is often seen as potentially harmful (Gabriel et al., 2023). This more optimistic viewpoint introduces the concept of emotion regulation as a facilitator, not merely an inhibitor for workplace well-being and performance (Grandey & Melloy, 2017; Lennard et al., 2019; Troth et al., 2018), which was investigated in the subsequent essays and will be outlined below.

6.2.1.1 Consequences of emotion regulation

In this dissertation, effective emotion regulation emerged as a pivotal factor for affective well-being, creativity, and performance. In particular, the results in Essay III indicated that employees' daily engagement in surface acting in small firms adversely affected creativity and performance due to its detrimental impact on affective well-being, which served as a mediating factor. These results support the COR theory (Hobfoll, 1989), indicating that surface acting is resource-depleting, and they reinforce existing meta-analytic research that positioned surface acting as a harmful strategy (Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2013; Mesmer-Magnus et al., 2012). Conversely, the study showed that deep acting enhanced creativity and performance, mediated by affective well-being. This finding contributes novel insights, as existing research on deep acting has yielded mixed results with regard to affective, attitudinal, and behavioral outcomes so far (Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2013).

Therefore, the investigation of creativity and performance in this non-service context extends extant literature on outcomes typically examined within service contexts (Gabriel et al., 2023), by presenting a case in which emotion regulation, specifically deep acting, is conducive rather than harmful. The positive link between deep acting, affective well-being, creativity and performance also adds to the understanding of the underlying mechanism of deep acting and its consequences: When employees try to act in alignment with their true emotions by deep acting, this, according to the study's results, also increases their affective well-being. This may be because employees feel aligned to their emotional experiences and therefore also to themselves (Gabriel et al., 2015). Engaging in deep acting involves empathizing with others, shifting perspectives, and being attentive (Hülshager & Schewe, 2011). These processes apparently lead to more cognitive resources, which are equally important for the creation of novel ideas and performance (Chae & Choi, 2018; Fredrickson, 2001), which is a potential explanation for why employees who use deep acting also report more creative behaviors. Conversely, surface acting commonly leads to a feeling of alienation due to the dissonance between felt and displayed emotions, and thus possibly to a discrepancy with one's own identity (Grandey & Melloy, 2017; Hochschild, 1983). This in turn decreases employees' resources and well-being, because they cannot show their true selves (Hobfoll, 1989), which decreases the capability to generate new ideas and to fulfill the tasks associated with their job roles (Fredrickson & Branigan, 2005).

The findings also underscore the importance of emotion regulation strategies in research on promoting creativity in the workplace: Employees should not only be creative and efficient "on paper" but also possess strong emotion regulation skills, as these are, according to the results of this study, essential for creativity and high performance. This also adds to past research that has predominantly seen positive emotions as enabling for creativity (Amabile et al., 2005; Bledow et al., 2013), but did not consider how the regulatable aspect of

expressing emotions contributes to creativity. Considering that creativity and performance are pivotal for a firm's success, particularly in smaller firms, the implications of these findings are especially significant in such contexts (Anderson et al., 2014; Andries & Czarnitzki, 2014; Lua et al., 2023).

Showing that deep acting, affective well-being, creativity, and performance go hand in hand is an important contribution to the theoretical discourse on healthy and meaningful behavior in the workplace (Blustein et al., 2023), also applicable to larger, more established organizations. The findings indicate that it is important for employees to engage in deep acting within their roles, as this is essential for fostering creativity and enhancing performance. This requirement goes beyond individual capabilities. It is equally important that a firm's display rules avoid promoting surface acting as a "faster", albeit superficial and inauthentic, strategy to regulate emotions (Moin et al., 2020). Instead, firms should ensure that employees have the time, knowledge, and resources to utilize deep acting (Grandey et al., 2015).

In exploring the consequences of emotion regulation strategies, past research has identified not only deep acting and surface acting as distinct strategies, but has also highlighted that individuals have the option to express their genuine emotions at work (Diefendorff et al., 2005; Hülshager et al., 2015). Examining this third category provides a novel perspective, contrasting with earlier research that predominantly compared deep acting and surface acting (e.g., Fisk & Friesen, 2012; Moin, 2018; Wang & Seibert, 2015).

The distinct consequences of the three strategies in the specific context of a crisis were studied in Essay II. Drawing on the EASI model (van Kleef, 2009), the results reveal that deep acting by leaders decreased employees' fear, but that deep acting was just as effective for employees' reactions (i.e., their job engagement and affective commitment) as genuine emotions (i.e., in this case, displaying fear). Furthermore, surface acting showed to be a less

advisable strategy, because it created negative emotions (i.e., hostility) among employees. Considering emotion regulation as a strategic choice of leaders, this research suggests that leaders could choose to show their genuine emotions in crisis situations, which challenges prior assumptions that it is always more favorable for leaders to regulate their emotions over the display of negative emotions (Humphrey et al., 2015; Humphrey et al., 2008).

Exploring the outcomes of displaying genuine emotions raises the question of whether it is always preferable to express true feelings, instead of regulating them. In younger and smaller firms, a stark contrast emerges regarding the norms of emotional display compared to those in the service industry and possibly even in more traditional, larger corporations (Burch et al., 2013; Grandey, 2000). Unlike service roles, where expressing authentic negative emotions like anger, frustration, or anxiety may be inappropriate (Grandey, 2000), leaders in young firms, that often lack (formal) display rules, might deem it suitable to share their genuine emotions, including negative emotions, such as fear (Burch et al., 2013).

Simultaneously, it is imperative to balance the personal consequences of emotion regulation with how these strategies are perceived by others. While this essay did not explore this aspect, the display of genuine emotions can lead to less exhaustion in comparison to emotion regulation (Martínez-Iñigo et al., 2007), suggesting that in specific situations, expressing genuine emotions might be advisable. However, the effect of revealing genuine emotions significantly depends on the nature of the emotion in question (Batchelor et al., 2018). For example, while expressing anger can sometimes foster proactivity, it often aggravates one's negative emotions and leads to counterproductive behaviors (Lebel, 2017). Such expressions of anger could also elicit unfavorable responses from employees, for instance resentment and diminished engagement, which could ultimately destabilize an organization (Madera & Smith, 2009). Consequently, research comparing emotion regulation

and the expression of genuine emotions must always take into account the contextual circumstances.

6.2.1.2 Antecedents of emotion regulation

Turning to potential antecedents of emotion regulation strategies, research has predominantly focused on situational factors (e.g., stressful interactions, conflicts) so far (Gabriel et al., 2023; Grandey, 2003; Grandey & Gabriel, 2015), but there is still much to be learned about the influence of individual factors that may decrease the use of harmful emotion regulation strategies (Grandey & Melloy, 2017), such as employees' sleep quality.

In the context of small firms, where the impact of each employee's performance is magnified due to limited resources (Greene et al., 1997), understanding individual factors like sleep quality and its impact on employees' behaviors is imperative (Barnes & Watson, 2019). While previous studies have already revealed the detrimental impact of emotion regulation, specifically surface acting, on sleep quality (Fouquereau et al., 2019; Gabriel et al., 2023; Wagner et al., 2014), Essay IV suggested sleep quality as a *precursor* to surface acting and deep acting. I investigated this relationship with the sleep and self-regulation model (Barnes, 2012), that draws on neuroscientific evidence that low sleep quality impairs emotion regulation by diminishing brain activity in the amygdala and prefrontal cortex, which are critical areas for emotional control (Beauregard et al., 2001; Ochsner et al., 2004).

The findings of this study reveal that better sleep quality reduces the likelihood of engaging in surface acting, mediated by enhanced daily emotion regulation ability. Conversely, the results in this study showed that daily sleep quality did not influence deep acting on the within-person level, suggesting its roots in more stable abilities rather than daily influential factors. This distinction emphasizes that deep acting may be less variable than surface acting, and points out that deep acting may be more inherent to employees' traits, rather than the occasional use of surface acting.

The findings underscore that surface acting is not only a result of interactions at work (Boyd et al., 2015; Grandey & Melloy, 2017; Hochschild, 1983), but that it is also influenced by the daily available cognitive resources of individuals as a result of their sleep quality (Ni Zhang et al., 2022). Within the broader discourse on workplace well-being, sleep quality has already been recognized as a significant factor contributing to employees' effectiveness at work (Chamorro-Premuzic, 2020). The recognition of sleep quality as an influential factor for emotion regulation not only broadens the scope of research, but also underscores its integral role in promoting healthy behaviors both within and outside the workplace (Huo & Jiang, 2023).

Moreover, the negative influence of sleep quality on surface acting was more pronounced for employees with high display rules, highlighting the significant impact of workplace norms on employee behavior (Ekman & Friesen, 1969; Grandey, 2000; Hochschild, 1983; Rafaeli & Sutton, 1989). That is, employees with stronger display rules (i.e., employees who feel they underlie more norms in their respective firms regarding their emotional expressions) rely more on surface acting. The moderating effect suggests that high sleep quality reduces surface acting even more for employees with higher display rules, underlining the importance of sleep quality for these employees.

The findings underscore the importance for firms to create work environments that are conducive for employees' sleep quality (e.g., by regular breaks) so that employees engage in less surface acting; and to potentially reduce the psychological burden imposed by display rules (Grandey et al., 2015). This is particularly relevant in resource-constrained environments like small firms (Greene et al., 1997), where minimizing surface acting is vital for maintaining employee performance, creativity, and well-being, as shown in Essay III.

To sum up, this dissertation extends the literature on antecedents and consequences of emotion regulation. It corroborates existing findings on surface acting as being detrimental,

affecting not only the individuals practicing it, but also others (Fisk & Friesen, 2012; Moin, 2018). However, improving personal predispositions, like daily sleep quality, can lead to a decreased use of surface acting. Interpreting the results related to deep acting offers a *positive* perspective on emotion regulation. The findings demonstrated advantages of deep acting for creativity and performance, which may, in turn, enhance the overall performance of the firm (Sayre et al., 2021; van Gelderen et al., 2017; Xanthopoulou et al., 2018). Furthermore, the findings from the specific crisis situation studied in this dissertation indicate that both a leader's deep acting and the display of genuine emotions can play beneficial roles in maintaining employee commitment and engagement.

6.2.2 Linking emotion regulation strategies and emotion regulation ability

The essays in this dissertation presented a nuanced analysis of emotion regulation within non-service organizational contexts, considering emotion regulation both as a set of strategies and as an inherent ability (Gabriel et al., 2023; Grandey & Gabriel, 2015). This dual perspective addressed a gap in the literature that typically studies emotion regulation as either an ability or a strategy, while research on the interdependence of the two aspects and thus their simultaneous measurement is still limited (Scherer et al., 2020).

This dissertation examined emotion regulation ability as an influencing factor for emotion regulation strategies, both as a general ability and a daily fluctuating factor. Essay III showed that emotion regulation ability enhances the positive effects of deep acting on affective well-being, illustrating the link between the general emotion regulation ability and the daily use of emotion regulation strategies. The findings suggest that employees with higher emotion regulation abilities feel more effective in aligning their felt emotions with their displayed emotions (Hülshager & Schewe, 2011). The successful engagement in deep acting also enhances the feeling of authenticity when interacting with others (Gabriel et al., 2023; Grandey & Gabriel, 2015), which in turn contributes to increased affective well-being.

Additionally, higher emotion regulation ability can protect employees from potential adverse effects, such as emotional exhaustion, that are not only associated with surface acting, but can possibly also result from deep acting (Grandey & Melloy, 2017), thereby further enhancing affective well-being.

Essay IV examined emotion regulation ability from the perspective of a daily changing ability, shedding new light on this ability by emphasizing that it is not just a stable personality trait as framed in the majority of past research, but can change on a daily basis (Lavender et al., 2017; Pavlacic et al., 2022). This also underlines the variability and hence influenceability of this ability, which implies that individuals can improve their (daily) emotion regulation ability by adjusting external influencing factors (i.e., in this case, their sleep quality).

By investigating the link between emotion regulation ability and emotion regulation strategies (Grandey & Melloy, 2017; Scherer et al., 2020), this dissertation also offers new insights for emotional intelligence scholars (Salovey & Mayer, 1990). Although extant research has repeatedly stated that emotional intelligence and, specifically, the subdimension of emotion regulation ability, may be an influential factor for emotion regulation strategies (Gabriel et al., 2023), it is not entirely clear what an emotionally intelligent behavior with regard to the use of strategies would actually imply. As the results in Essay II showed, leaders could benefit from either displaying genuine emotions or using the strategy of deep acting during crisis. As showing genuine emotions is a less resource-intensive and a similarly authentic strategy as deep acting (Humphrey et al., 2015), it would be advisable to show genuine emotions, hence, reflecting a potential higher emotion regulation ability and therefore more “emotionally intelligent” behavior in this very specific context. However, as already discussed in detail above, the rationality of showing genuine emotions must always be evaluated in relation to the specific emotion and the situational context.

6.2.3 Novel approaches to studying intrapersonal and interpersonal perspectives

This dissertation extends previous research by demonstrating novel approaches to exploring intrapersonal and interpersonal perspectives of emotion regulation (Fisk & Friesen, 2012; Gabriel et al., 2020). First, this dissertation extends past research on the intrapersonal perspective that has so far predominantly focused on the stable trait use of emotion regulation strategies (Hülshager et al., 2015; Pavlacic et al., 2022; Sayre et al., 2021; Trougakos et al., 2015), and emotion regulation as a constant individual ability (Lavender et al., 2017; Salovey & Mayer, 1990). Specifically, this dissertation utilized two daily diary studies to examine the impact of emotion regulation strategies on employees' intrapersonal outcomes, specifically, affective well-being, creativity, and performance, and to investigate the role of sleep quality as a daily predictor of emotion regulation abilities and the use of strategies.

The daily approach to explore intrapersonal variables reflects a methodological approach in emotion regulation research that is still in its infancy, particularly in the non-service organizational context, reflecting a more reliable way to study emotion regulation dynamics (Lennard et al., 2019; van Gelderen et al., 2017; Xanthopoulou et al., 2018), and providing the opportunity to study both within-person and between-person effects simultaneously. This has yielded intriguing findings. As already mentioned above, surface acting had a consistently indirect negative effect on creativity and performance at the within-level. However, at the between-level, surface acting surprisingly showed direct positive effects on creativity and extra-role performance. This indicates that employees who generally engage in more surface acting tend to be more creative and exhibit higher performance at work. A potential explanation for this finding might be that surface acting and the feigning of emotions itself requires a degree of creativity, thereby potentially requiring similar cognitive processes as being creative (Chae & Choi, 2018; Fredrickson, 2001). However, as consistently showed in past research, the results have to be interpreted in light of other

potential consequences of using emotion regulation strategies, specifically surface acting, which may arise in the long term, including potentially harmful impact on well-being and job satisfaction (Hülshager & Schewe, 2011; Mesmer-Magnus et al., 2012).

With regard to intrapersonal antecedents of emotion regulation, in Essay IV, I highlighted the role of daily sleep quality as a significant predictor for less frequent daily surface acting, mediated by daily emotion regulation ability. This daily approach to studying emotion regulation ability offers a new perspective, as most research has focused on emotion regulation ability as an ability individuals either possess or lack (Lavender et al., 2017; Pavlacic et al., 2022). In this study, I examined emotion regulation ability as an ability that can vary daily (Lavender et al., 2017), influenced by personal factors such as sleep quality. This dynamic perspective is intriguing because it suggests that this ability can also be developed or learned (Gabriel et al., 2023). This has implications for research, indicating a need for a more dynamic approach. It is essential to identify other influencing factors that can lead to fluctuations in emotion regulation ability (e.g., physical activity, mental or physical preconditions) and could therefore decrease surface acting.

While both diary studies in Essays III and IV focused on the intrapersonal perspective, studying emotion regulation in non-service contexts also implicates that individuals working in firms are part of a larger whole—especially in the context of small and young firms, where teams usually work closely together, and their behavior can potentially influence others (Atkinson, 2007; Wilkinson, 1999). Although both diary studies specifically examined the intrapersonal perspective, they also have interpersonal implications, because beneficial emotion regulation strategies, such as deep acting, can also influence team dynamics and relationships (Gabriel et al., 2023; Gabriel et al., 2020; Troth et al., 2018). This is not only important in the organizational contexts studied in this dissertation, but also in other work environments in larger or established firms, where employees increasingly value

environments where empathetic communication and collaboration are recognized as vital components of success (Blustein et al., 2023; Madrid et al., 2019).

Essay II delved deeper into this interpersonal perspective by specifically focusing on the leadership role in young firms. This study highlighted that emotion regulation impacts not only individuals but also their interactions within the workplace, emphasizing the interpersonal implications of emotion regulation in non-service organizational contexts (Fisk & Friesen, 2012; Gabriel et al., 2020; Wang & Seibert, 2015). Here, unlike the transient interactions typical of the service sector (Gabriel et al., 2020; Hu & Shi, 2015), individuals engage in long-term collaborations, making interpersonal relationships at work more meaningful (Troth et al., 2018).

Furthermore, specifically in a crisis context, leaders have to think about how they can motivate their employees and lead through a crisis (Anwar et al., 2023; Ramli et al., 2022; Wu et al., 2021). The findings of Essay II suggest that in such contexts, leaders' authentic display of negative emotions, in this case their fear, can be just as effective in eliciting employee affective commitment and job engagement as deep acting. This challenges the traditional assumption in the literature that suggested the superiority of emotion regulation over the expression of genuine negative emotions to prevent adverse outcomes (Humphrey, 2012; Humphrey et al., 2015).

The study thereby contributes to the understanding of authentic leadership as an inherently interpersonal concept (Luthans & Avolio, 2003). Contrary to earlier research that linked authentic leadership mainly to the expression of positive emotions (Ilies et al., 2005; Luthans & Avolio, 2003), this investigation explores the potential of leaders expressing negative emotions, thereby expanding the scope of authentic leadership to include a broader spectrum of emotional expressions in engaging with employees.

This is equally important when considering relationships in larger firms. In today's work culture, the quality of workplace relationships becomes paramount, underscoring the need for shared commitment to collective goals (Blustein et al., 2023). Although financial difficulties in large and established firms might in most case not be as dramatic as in young firms, the implication that employees value authentic leaders are transferable to these organizational contexts as well (Aw et al., 2019; Cha et al., 2019).

6.3 Practical implications of the dissertation

The increasing awareness of the importance of emotional well-being in the workplace (McKinsey & Company 2023a; Sonnentag et al., 2023) has shaped the research presented in this dissertation, highlighting the critical role of emotion regulation. In an era marked by unprecedented uncertainties and novel crises (McKinsey & Company 2020; Shepherd, 2020; Sonnentag et al., 2023), understanding the advantages and disadvantages of emotion regulation and adopting effective strategies is more essential than ever (Anwar et al., 2023; Gabriel et al., 2023; Wu et al., 2021). In light of increasing global political and economic tensions, it is plausible that uncertainty in the workplace will occur more frequently (Grebe et al., 2024), making emotion regulation as a crucial factor for well-being, performance, and health in the workplace even more important in the future.

Emotion regulation is a pivotal topic for both employees and leaders across various organizational contexts, underscoring its significance for firms ranging from entrepreneurial, young, and small, but also to more established and larger firms. Consequently, the insights derived from this dissertation hold critical implications not only for the contexts studied in the respective essays, but also for enhancing individuals' engagement and performance in established firms.

First, the results of the essays have specific practical implications in the context of high-stress environments like entrepreneurial firms (Burch et al., 2013). As delineated in

Essay I, this significantly applies to entrepreneurial firms as contexts marked by uncertainty and stress (Schindehutte et al., 2006; Shepherd et al., 2009), underscoring the importance of mastering emotion regulation ability and the use of suitable emotion regulation strategies for overcoming challenges and fostering well-being (Burch et al., 2013). This essay encouraged entrepreneurs to leverage emotion regulation as a strategic resource, considering its influence not only on themselves but also on their teams and overall firm dynamics and success (Huy & Zott, 2019).

Second, and building on the notion that emotion regulation is not only important for the individual, but has an interpersonal component (Gabriel et al., 2020; Troth et al., 2018), the interpersonal lens should be considered especially during challenging times (Wu et al., 2021). Despite the flexibility leaders in entrepreneurial and young firms potentially have in expressing their emotions in contrast to larger and more traditional firms (Burch et al., 2013), not all strategies are equally effective, especially during crisis, as shown in Essay II. The findings indicate that authenticity in emotional expressions is key to avoiding negative outcomes on employees. Leaders struggling to regulate emotions convincingly by deep acting should hence consider to resort to expressing genuine emotions, thereby preventing negative employee reactions by (unintentional) surface acting, which could worsen already difficult situations. In sum, leaders should serve as role models and be aware of how their behavior impacts their employees. This also links to the larger debate about employees' desire for authentic leadership (Agote et al., 2016). Especially in times of war for talent, organizations need to be aware of the turnover intentions that can be triggered when employees do not feel valued by their leaders (Beijer et al., 2024). Feeling valued and appreciated can enhance the perceived meaningfulness of work and increase commitment and motivation (Blustein et al., 2023). This also has implications for large and established organizations where employees

also may potentially prefer leaders who are mindful of their own and their employees' emotional well-being, and lead in an authentic and honest way.

Third, Essay III emphasized the critical need for effective emotion regulation strategies for creativity and performance (Atkinson, 2007; de Jong & Den Hartog, 2007; Laguna et al., 2021). Employees and managers should be aware of how the use of emotion regulation strategies can be potentially resource-depleting with negative consequences for their creativity and performance (Hobfoll, 1989). Spending the entire day pretending to feel emotions is exhausting for employees, and surface acting, in particular, can lead to a sense of alienation (Grandey & Melloy, 2017). This might also lead to employees perceive their work as less meaningful. Leaders should try to prevent this and make their employees feel that they can bring their authentic selves to work. This can be achieved, for example, through training, workshops, and promoting healthy display rules. While display rules can have advantages in providing orientation in interpersonal situations, they are only helpful when they do not prescribe the engagement in harmful emotion regulation strategies (Grandey et al., 2015).

This is not only important for the context of small firms that has been studied in this study, but also for large firms that, in the face of the war for talent (Chambers et al., 1998), must ensure that they communicate the firm culture in such a way that potential employees do not feel they will need to constantly engage in surface acting in their work roles. Furthermore, the findings regarding the impact of emotion regulation on creativity and performance are equally important for larger firms who have to stay competitive in economies that are rapidly changing (Lua et al., 2023).

Fourth, the exploration of the interdependence between emotion regulation strategies and emotion regulation ability, as particularly examined in Essay III and Essay IV, holds substantial relevance for practical application in firms. It is critical for organizational leaders to grasp the complexities of emotion regulation ability and the meaning of emotion regulation

strategies: Despite the already widespread recognition of emotional intelligence with emotion regulation ability as a sub concept (Mayer & Salovey, 1997), knowledge about various emotion regulation strategies in organizations is equally important. It is imperative for firms to integrate the topic of emotion regulation ability into their training and development initiatives, raising awareness among employees and managers about how to avoid harmful emotion regulation strategies such as surface acting (Gabriel et al., 2023).

Fifth, focusing on sleep quality as a precursor to effective emotion regulation, as investigated in Essay IV, it is evident that maintaining good sleep quality is essential for employees and their performance at work (Barnes & Watson, 2019). This not only enhances employees' daily emotion regulation ability, but also reduces the tendency to engage in surface acting at work, which is potentially harmful (Gabriel et al., 2023). In contexts with high display rules, sleep quality is particularly important for decreasing the use of surface acting. Leaders should consider the challenges employees face professionally and personally, which, in turn, could affect their sleep quality, and offer supportive measures. These could include to encourage regular breaks and flexible working arrangements that fit employees' chronotypes, that is, their distinct biological clocks (Kühnel et al., 2020), or the implementation of training programs that focus on workplace well-being, with an emphasis on improving sleep quality and emotion regulation ability.

Sixth, these findings also have practical implications given the changing needs of employees. In the past, topics such as workplace wellbeing, including aspects such as sleep quality, were often neglected (Barnes, 2012). However, today's generations are placing increasing emphasis on these areas, also influenced by the desire for authenticity in the workplace (McKinsey & Company 2023b; Weeks & Schaffert, 2019). This could mean that employees see emotion regulation as an additional burden that is better avoided. It is unlikely that harmful emotion regulation strategies like surface acting will disappear from the

workplace completely. However, the current trends towards more authenticity, well-being, and health will continue to drive changes in the future.

6.4 Limitations

Although this dissertation has several theoretical and practical implications, the chosen methodological and contextual approaches are not without limitations. First, one limitation of the research presented in this dissertation relates to the issue of common method bias, specifically, same-source bias, inherent in the quantitative studies due to data being collected from a single perspective within each sample (Podsakoff et al., 2003). For instance, to accurately assess the impact of emotion regulation strategies within a workplace setting, it would be necessary to gather perspectives from both the individual engaging in emotion regulation, as well as observers. This limitation suggests that future research could benefit from adopting a dyadic study approach, where data is simultaneously collected from interacting pairs, such as employees and their direct supervisors or colleagues. Such an approach would provide a more complete understanding of the emotion regulation strategies during interpersonal interactions and their effectiveness from more than one viewpoint. This could also offer the opportunity to investigate additional factors (e.g., preexisting relationships between leader and employees or coworkers) that might influence how emotion regulation strategies are carried out, how they affect the individual, and how they are perceived by observers. This is particularly important in the organizational context—unlike most interactions with customers in many service contexts, interactions with others in firms are often recurring and can be influenced by previous experiences and existing relationships with others (Gabriel et al., 2020; Hu & Shi, 2015).

Second, a limitation that arises when conducting vignette studies, such as in Essay II, is its reliance on hypothetical scenarios to elicit responses from participants. While this method allows for control over variables and the exploration of specific situations, it may not

fully capture the complexity and nuance of real-life experiences (Aguinis & Bradley, 2014; Taylor, 2005). Participants' responses to vignettes might not accurately reflect their actual behaviors or decisions in real situations due to factors such as social desirability bias, lack of emotional engagement with the hypothetical scenario, or the inability to foresee all the variables that would influence their behaviors in reality (Atzmüller & Steiner, 2010). This gap between hypothetical and real-life responses can limit the external validity of the findings, making it challenging to generalize the results to actual behaviors outside the controlled conditions of the study (Aguinis & Bradley, 2014). However, as Highhouse (2007) noted, this would probably only concern the effect size, rather than the direction of effects.

Third, the studies in this dissertation were each conducted in limited time frames. Although the diary studies encompassed a methodological valid design, it would be useful to measure the emotional experiences of employees or managers multiple times, for example both in the morning and evening (Wagner et al., 2014; Zhan et al., 2016). In general, it would be beneficial to conduct longitudinal studies on how emotion regulation ability and the use of emotion regulation strategies evolve over time (Gabriel et al., 2023).

Fourth, this dissertation's three quantitative studies utilized samples from Germany, a country known for its culture that favors direct emotional expressions (Schunk et al., 2021). Had the research included participants from the U.S. or China, the outcomes might have varied: For instance, expressing genuine emotions like fear such as in the vignette study in Essay II might have seemed less realistic in a Chinese workplace setting, where there is usually an expectation for minimal emotional expression, with employees and managers often encouraged to suppress their feelings (Allen et al., 2014). Similarly, in the U.S., the display rules might diverge, with a prevalent expectation for individuals to consistently exhibit positivity and enthusiasm (Grandey et al., 2010), which could have influenced the results of

the diary studies, as the display rules in these contexts would have potentially led to a positive influence on the use of acting strategies.

6.5 Future research

6.5.1 Conceptualizations of emotion regulation

It is clear that there are still open questions in research regarding both emotion regulation strategies and emotion regulation ability. To date, deep acting and surface acting are still the standard way to explore emotion regulation strategies in the work context, and only a few researchers explored new categories of strategies (Alabak et al., 2023; Gabriel et al., 2023). As a distinct and so far understudied emotion regulation strategy, the expression of genuine emotions was explored in Essay II, and it was found to be a viable option for leaders to show genuine emotions in this specific context. However, there is still much to be discovered about the role of genuine emotions (Gabriel et al., 2023; Lennard et al., 2019). This concerns both the intrapersonal and interpersonal perspectives, that is, how different types of positive (e.g., joy, enthusiasm) or negative (e.g., guilt, envy) genuine emotions affect the individuals themselves and others in different situations in contrast to regulating emotions.

As another addition to the comparison of deep acting and surface acting, a study by Gabriel et al. (2015) found that there are different actor profiles, including non-actors, low-actors, and regulators as additional categories to deep and surface acting, which could provide a more realistic picture of strategies. This could be further explored, specifically in non-service contexts, and it would be interesting to see, for example, whether leaders or employees who adopt certain strategies are more successful in their jobs, are perceived as more likable, or have better work relationships.

In addition, previous research has predominantly investigated the upregulation of negative emotions (Tamir & Ford, 2012), while the downregulation of positive emotions has been mainly associated with employees in occupational roles that prescribe the need to

display negative emotions when employees are actually feeling positive emotions (e.g., police officers or undertakers) (van Gelderen et al., 2017). In the non-service organizational context, however, it would be equally interesting to investigate whether and how employees or leaders regulate their positive emotions, for example, in situations where both parties want to display more strictness, such as in performance review meetings or salary negotiations.

Regarding emotion regulation ability, there is also still a need to understand the relationship with emotion regulation strategies in more detail. While this dissertation focused primarily on emotion regulation ability for individual purposes, future research could further investigate interpersonal emotion regulation ability. Underexplored questions include, for example, how interpersonal emotion regulation ability relates to the use of strategies aimed at regulating not only one's own emotions, but also which distinct strategies are used to actively regulate others' emotions. Emotion regulation research could benefit from looking at adjacent research domains, for example research that uses scales that measure the emotion regulation of others and oneself simultaneously (Niven et al., 2011). In this domain, studies have shown that affect-improving strategies of leaders lead to innovation (Madrid et al., 2019) and team citizenship behavior (Madrid et al., 2018).

6.5.2 Research contexts

Shifting emotion regulation research to organizational contexts is crucial, and the choice to study entrepreneurial, young, and small firms as contexts charged with emotional experiences (Burch et al., 2013), restricted resources (Sahut & Peris-Ortiz, 2014), and the dependency on innovation (Andries & Czarnitzki, 2014) was suitable to answer the research questions of this dissertation. Although this led to a wide range of points of connection, also in the broader non-service organizational context, using different organizational contexts such as entrepreneurial, young, and small firms comes at the expense of the depth of the analyses.

Future research should therefore focus on selecting specific contexts and utilizing the opportunities for further investigation highlighted in these essays to provide targeted insights.

Various key developments concerning the stronger focus on well-being in the workplace influenced the essays and their specific research contexts in this dissertation.

Today, however, there are two other key developments that I did not consider, but which offer diverse paths for future research in the field of emotion regulation. These key developments involve the ongoing globalization and the technologization of the workplace, which led, for instance, to the increasing use of video meetings in remote work contexts (Johnson & Mabry, 2022), as well as the increasing automation of work and human-computer interaction through artificial intelligence (AI) (Kemp, 2023).

First, the process of globalization has led to more interconnected economies, making it common for firms to operate across multiple countries. The role of emotion regulation in cross-cultural teams has not yet been extensively explored (Hui et al., 2017), despite the potential for cultural differences in perceived display rules, emotion expressions, and regulation strategies that could lead to misunderstandings or varying perceptions of emotion regulation strategies (Allen et al., 2014; Mastracci & Adams, 2018). This could be aggravated by the physical distance of team members in virtual teams, and examining the role of leaders who lead these cross-cultural teams, could offer valuable insights (Parush & Zaidman, 2023).

Second, the increasing prevalence of video meetings has given rise to the term zoom fatigue, a term that describes the exhaustion people often feel after video meetings (Nesher Shoshan & Wehrt, 2022). Recent studies suggest that this aversion may stem from the constant acting required during video meeting (Johnson & Mabry, 2022), and initial research indicates that especially surface acting is more frequent in video meetings (Johnson & Mabry, 2022). However, there is a lack of comprehensive research comparing emotion regulation between video and in-person meetings. Regarding deep acting, it might be that employees

engage in more effort in face-to-face meetings because display rules are perceived to be higher in physical setting. As for genuine emotions, it is similarly unclear whether they are more pronounced in personal meetings or in video meetings, where the latter might provide a sense of a safe environment (Gabriel et al., 2023), thereby potentially promoting the expression of genuine emotions.

Third, a relatively new development in management is the increasing automation of work tasks using AI (Budhwar et al., 2023). One example is the use of generative AI tools, for instance ChatGPT (Berg et al., 2023; OpenAI, 2022). Generative AI offers the possibility to automate routine tasks, make work tasks more efficient (Budhwar et al., 2023), and it is likely to also affect the emotional experience at work, as existing studies on human-computer interactions have shown (Brave & Nass, 2007; Lee & Sun, 2023; Tang et al., 2023). The potential efficiency gain in work tasks through the use of ChatGPT can potentially reduce employees' work stress (Paul et al., 2023), thus also affecting the daily emotional states of employees and their need for emotion regulation. For employees with a lot of customer contact, ChatGPT could for example automate the handling of customer interactions (Korzynski et al., 2023), thereby reducing the emotional burden on employees. Moreover, previous research has shown that human-computer interactions can affect employees' emotional states depending on whether they are either satisfied or dissatisfied with the system (Jia et al., 2023). A higher emotion regulation ability, as well as the use of beneficial emotion regulation strategies, could hence be advantageous when employees are dissatisfied with the system. At the same time, the provided support by systems such as ChatGPT could also lead to a feeling of being no longer needed at work, which could also affect the overall emotional states and self-perceptions of employees (Jia et al., 2023), and hence, make a higher emotion regulation ability necessary to deal with these changed working conditions.

6.6 Summary

In summary, this dissertation explored antecedents and consequences of emotion regulation in the contexts of entrepreneurial, small, and young firms, and shed light on emotion regulation as a set of strategies and as an ability, from both intrapersonal and interpersonal viewpoints. The results of this dissertation can be integrated into various key developments in the working world and are hence applicable to the broader organizational context. Emotion regulation is an important factor when it comes to the relevance of well-being and (mental) health topics in uncertain times (Blustein et al., 2023; McKinsey & Company 2023a; Sonnentag et al., 2023), and the ongoing necessity of firms to remain innovative and competitive through employee creativity and performance (Laguna et al., 2021; Lua et al., 2023; Williamson et al., 2019). Employees and managers alike should view emotion regulation as a strategic resource (Huy & Zott, 2019), which can help enhance individual well-being, commitment, performance and overall firm success.

7. References

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8. Appendix

Appendix A – Coding of themes (*Integrating emotion regulation, emotional intelligence, and emotion-focused coping in the entrepreneurial context: A review and research agenda*)

First-order themes		Second-order themes		Third-order themes
Emotional intelligence Emotion regulation	⇒	Individual ability		Entrepreneurial emotion management perspectives
Emotional intelligence Emotion regulation/Emotional labour Emotion-focused coping	⇒	Trait	⇒	
Emotion regulation/Emotional labour Emotion-focused coping Anticipating emotions, using specific emotions (e.g., passion) for managing other emotions	⇒	Situation-specific strategies		
Culture Perceived state of environment	⇒	Environmental conditions		Macro- and meso-level factors
Firm type Firm or team size Firm culture	⇒	Organisational predispositions	⇒	
Founding stage During growth After failure	⇒	Organisational phases		
Individual entrepreneur Individual self-employed	⇒	Intrapersonal perspective		Individual factors
Team level Leader–employee relationship Other stakeholders	⇒	Interpersonal perspective	⇒	
Entrepreneurial abilities and traits Prior experience	⇒	Individual predispositions		
Entrepreneurial team-efficacy Interpersonal process effectiveness	⇒	Relational predispositions		Antecedents
Venture obstacles Perceived stress Pitch Role-related problems Conflict Failure	⇒	Entrepreneurial events		
Negative emotions in general Fear (of failure) Anxiety Grief Sadness Envy Regret Ambivalent emotions	⇒	Managed emotions	⇒	
Entrepreneurial performance Well-being Change in emotions Learning from failure Motivation to try again	⇒	Individual outcomes	⇒	Consequences
Venture survival Leader emergence Team innovation performance Team collaboration	⇒	Venture outcomes		

Appendix B – Hypothetical scenario and vignettes (*Employee reactions to leader emotional display strategies in a crisis situation*)

Hypothetical scenario

You have been working in the sales team of a young firm since its foundation four years ago, in which almost 40 employees are now employed. Your company has been badly affected by the coronavirus crisis and you are already noticing that it is getting more difficult to sell your products. You and your team have already thought about possible measures to increase the sales figures again and how you could expand your offerings—for instance, online. In the weekly meeting with all employees, your CEO has bad news to announce: The negative developments of the last weeks have led to a liquidity strain. The existence of the company and the jobs can only be secured if new ideas and distribution channels can be established. Your CEO emphasizes that more than ever you need motivation and commitment in sales in order to get the decreasing number of customers under control.

Vignette genuine emotions (i.e., display of fear)	Vignette deep acting	Vignette surface acting
After your CEO has announced the bad news, he is turning to you and your colleagues personally and is explaining the next steps. While he is speaking, you notice that he is scared, which is also reflected in his facial expression. You notice that he shows his spontaneous emotions in this situation. Then he says: “I am worried that we won’t get out of this difficult situation.” It seems to you that the negative emotions that he shows at this moment are in line with his real emotions.	After your CEO has announced the bad news, he is turning to you and your colleagues personally and is explaining the next steps. While he is speaking, he has a positive facial expression. You notice that he tries to be positive despite this crisis situation and to really feel the positive emotions that he is showing. Then he says: “We can do it—I am confident that we can get out of this difficult situation.” It seems to you that your CEO is making an effort to really experience the positive emotions that he is showing at this moment.	After your CEO has announced the bad news, he is turning to you and your colleagues personally and is explaining the next steps. While he is speaking, he has a positive facial expression, but you notice that he is suppressing his real emotions in this crisis situation. Then he says: “We can do it—I am confident that we can get out of this difficult situation.” It seems to you that your CEO is pretending to feel positive emotions that he is not really experiencing at this moment.