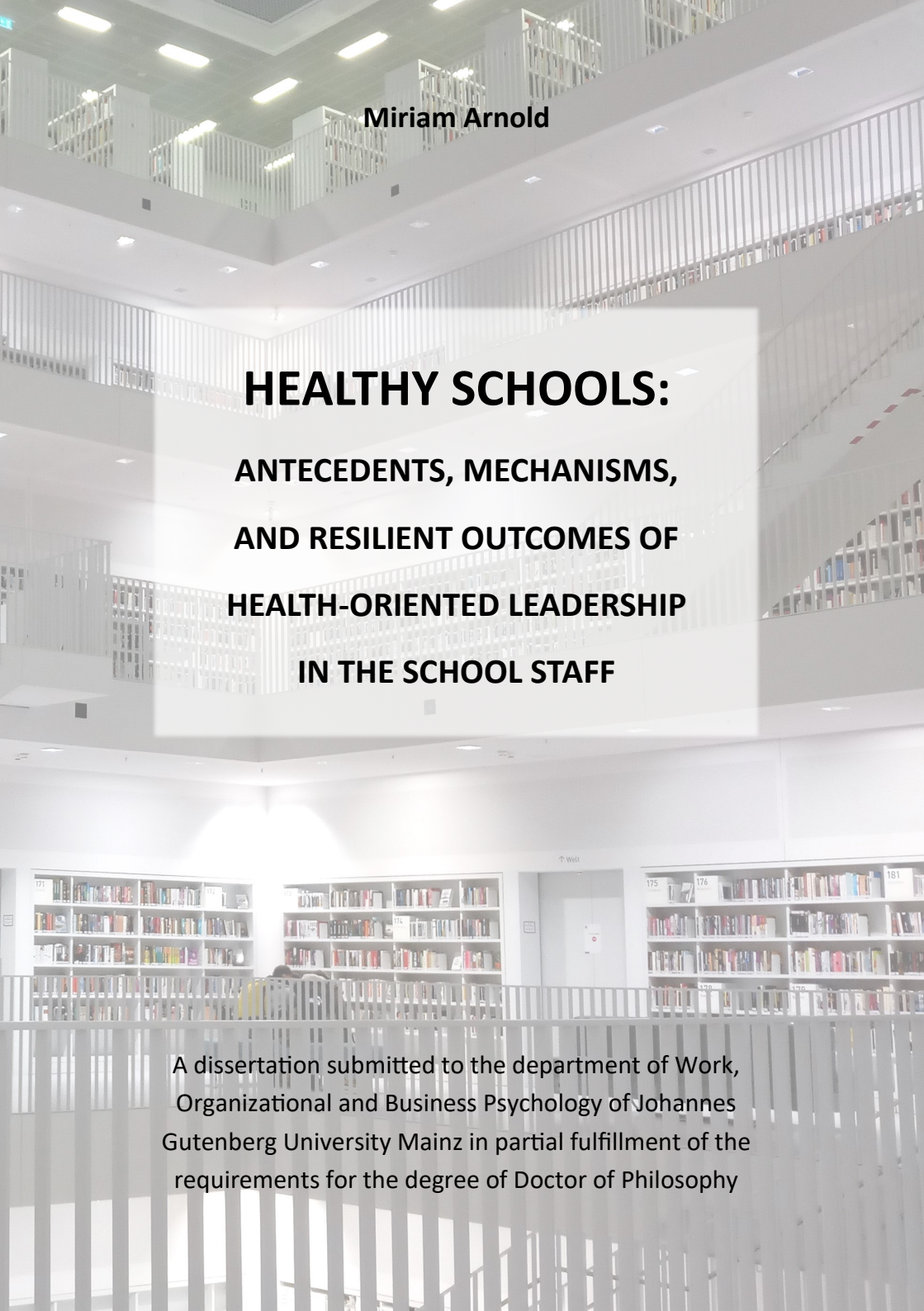
Miriam Arnold

HEALTHY SCHOOLS:

ANTECEDENTS, MECHANISMS, AND RESILIENT OUTCOMES OF HEALTH-ORIENTED LEADERSHIP IN THE SCHOOL STAFF



A dissertation submitted to the department of Work, Organizational and Business Psychology of Johannes Gutenberg University Mainz in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Healthy Schools:
Antecedents, Mechanisms, and Resilient Outcomes of Health-Oriented Leadership in the School Staff

Inauguraldissertation
zur Erlangung des Akademischen Grades
eines Dr. phil.,
vorgelegt dem Fachbereich 02: Sozialwissenschaften, Medien und Sport
der Johannes Gutenberg-Universität Mainz

von
Miriam Arnold, M.Sc.
aus Esslingen

Mainz
2022

Referent: Prof. Dr. Thomas Rigotti,
Johannes Gutenberg-Universität Mainz

Korreferent: Prof. Dr. Jörg Felfe,
Helmut-Schmidt-Universität Hamburg

Korreferentin: Prof. Dr. Margarete Imhof,
Johannes Gutenberg-Universität Mainz

Tag des Prüfungskolloquiums: 20.06.2022

Acknowledgements

For my partner and parents – who believed in me and unconditionally supported my scientific career path.

A warm thank you

- to my supervisor for his inspiration, developmental feedback, and challenging ideas

- to my colleagues and the research assistants who made every day at work fun and supported the data collection

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Abstract

Over the past decade, many studies have examined the relationship between different forms of leadership and employee health and well-being, supporting the development of various concepts of healthy leadership. This thesis focuses on health-oriented leadership (HoL) as one such concept, which is characterized by cognitions and behaviors specific to the individual's health (SelfCare) and the health of followers (StaffCare). While both leaders and followers can demonstrate SelfCare, StaffCare pertains specific to the role of a leader. In this investigative endeavour, three research questions guided the design and implementation of three empirical studies. The existing literature on HoL has identified relationships between StaffCare and different physical or general health outcomes as well as motivational and strain outcomes. Expanding on these findings, the first research question asked: Can StaffCare also contribute to followers' demonstration of resilience under adverse circumstances? Meanwhile, the second research question reflects the importance of gaining an understanding of mediators in order to further develop theories, posing the following query: What key mechanisms shape the relationship between StaffCare and followers' resilience? The formulation and investigation of the third research question involved studying antecedents at the leader level in order to identify ways to support leaders in practicing HoL and further enlarge the nomological network surrounding HoL. Thus, this thesis's third research question sparked an examination of the following topic of inquiry: Based on an integration of the HoL model with the job demands–resources (JD–R) model, what are antecedents of SelfCare and StaffCare at the leader level? Overall, this investigation entails an exploration of all three research questions in different status groups among teaching staff. The first two studies focused on the relationship between StaffCare and resilience in novice teachers and teachers. The third study approached the topic of interest from a different perspective by examining antecedents to StaffCare in school principals.

The first study applied an exploratory person-centered method to investigate whether different trajectories of mental and physical health might exist in novice teachers at the start of their induction period. Developments related to the health of *N* = 776 novice teachers could be grouped into three latent trajectories of physical health and four latent trajectories of mental health. Notably, both the StaffCare of the leaders in the study seminar and the novice teachers' positive psychological capital (PsyCap) explained the probability of belonging to the trajectories with stable physical/mental health when compared to most other trajectories. Moreover, the study findings support the mediation of StaffCare on health trajectories via PsyCap.

The second prospective study explored the relationship between school principals' application of pre-pandemic StaffCare and teachers' demonstration of resilience during the COVID-19 pandemic. In this study, PsyCap and psychosocial safety climate were both implicated as mediators in this relationship. However, the study results for a sample with complete datasets of *N* = 107 teachers did not support a direct relationship between StaffCare and resilience. That said, the hypothesized indirect relationships of StaffCare with resilience through PsyCap and psychosocial safety climate as parallel mediators found empirical support. Teachers who perceived their school principals as more aware and considerate of health topics before the pandemic also reported a better psychosocial safety climate in their school and higher individual PsyCap, which ultimately allowed them to experience less strain despite the stressor load during the first wave of the pandemic.

In the third study, the focus shifted from teachers to school principals as leaders, centering around the situational and individual antecedents of StaffCare in order to answer the third research question. Based on the JD–R model, job resources and demands were considered antecedents of the leaders' SelfCare as atype of personal resource. Additionally, I hypothesized that leaders' SelfCare would mediate the relationship between job resources and work engagement as well as

between job demands and emotional exhaustion. Lastly, StaffCare, framed as part of a leader's performance, was treated as an outcome of the motivational process and the health-impairment process as proposed within the JD–R model. A weekly diary study involving *N* = 234 school principals largely supported the proposed model. School principals, who received higher amounts of resources in one week than another, were able to carry out more SelfCare, which helped them engage in their work more deeply and contributed to their StaffCare. However, job demands and emotional exhaustion did not significantly relate to StaffCare at the weekly level.

Overall, this thesis considerably furthers scholars' understanding of resilience as an outcome of StaffCare and the corresponding processes as well as the antecedents that allow leaders to exert StaffCare toward their followers. This investigative exploration of the three research questions in different samples of school staff has thus facilitated the formation of a comprehensive picture of HoL in schools, providing profound practical implications for this specific segment of the workforce.

Zusammenfassung

In den letzten zehn Jahren haben viele Studien den Zusammenhang zwischen verschiedenen Formen der Führung und der Gesundheit und dem Wohlbefinden der Mitarbeitenden untersucht und damit die Entwicklung verschiedener Konzepte von gesunder Führung motiviert. Diese Arbeit konzentriert sich auf gesundheitsorientierte Führung (Health-oriented Leadership; HoL) als ein solches Konzept, das sich durch Kognitionen und Verhaltensweisen auszeichnet, die sich auf die Gesundheit des Einzelnen (SelfCare) und die Gesundheit der Mitarbeitenden (StaffCare) beziehen. Während sowohl Führungskräfte als auch Mitarbeitende SelfCare zeigen können, bezieht sich StaffCare speziell auf die Rolle der Führungskraft. Im Rahmen dieses Forschungsvorhabens wurden drei Forschungsfragen gestellt, die das Design und die Durchführung von drei empirischen Studien leiteten. In der vorhandenen Literatur zu HoL wurden Beziehungen zwischen StaffCare und verschiedenen körperlichen oder allgemeinen Gesundheitsmaßen sowie mit Motivation und Beanspruchung festgestellt. Aufbauend auf diesen Erkenntnissen lautete die erste Forschungsfrage: Kann StaffCare auch dazu beitragen, dass die Teilnehmenden unter widrigen Umständen Resilienz zeigen? Die zweite Forschungsfrage spiegelt die Bedeutung des Verständnisses von Mediatoren für die Weiterentwicklung von Theorien wider und lautet wie folgt: Welche Schlüsselmechanismen prägen die Beziehung zwischen StaffCare und der Resilienz der Mitarbeitenden? Die dritten Forschungsfrage beinhaltete die Untersuchung von Antezedenzien auf der Ebene der Führungskräfte, um Wege zur Unterstützung von Führungskräften bei der Ausübung von HoL zu finden und das nomologische Netzwerk rund um HoL zu erweitern. Die dritte Forschungsfrage dieser Arbeit gab somit den Anstoß für die Untersuchung des folgenden Themas: Was sind auf der Grundlage einer Integration des HoL-Modells mit dem Modell der Arbeitsanforderungen und Ressourcen (Job Demands-Resources; JD–R) Modell die

Antezedenzien von SelfCare und StaffCare auf der Ebene der Führungskräfte? In dieser Untersuchung werden alle drei Forschungsfragen in verschiedenen Statusgruppen von Lehrkräften untersucht. Die ersten beiden Studien konzentrierten sich auf die Beziehung zwischen StaffCare und Resilienz bei Lehramtsanwärterinnen und -anwärtern und Lehrkräften. Die dritte Studie näherte sich dem interessierenden Thema aus einer anderen Perspektive, indem sie die Antezedenzien von StaffCare bei Schulleitungen untersuchte.

In der ersten Studie wurde eine explorative, personenzentrierte Methode angewandt, um zu untersuchen, ob bei Lehramtsanwärterinnen und -anwärtern zu Beginn ihrer Einarbeitungszeit unterschiedliche Verläufe der psychischen und physischen Gesundheit bestehen könnten. Die Entwicklungen in Bezug auf die Gesundheit von *N* = 776 angehenden Lehrern konnten in drei latente Verläufe der körperlichen Gesundheit und vier latente Verläufe der psychischen Gesundheit eingeteilt werden. Bemerkenswert ist, dass sowohl die StaffCare der Führungskräfte am Studienseminar als auch das positive psychologische Kapital (PsyCap) der angehenden Lehrkräfte die Wahrscheinlichkeit der Zugehörigkeit zu den Verläufen mit stabiler körperlicher/psychischer Gesundheit im Vergleich zu den meisten anderen Trajektorien erklärte. Darüber hinaus unterstützen die Studienergebnisse die Mediation von StaffCare auf Gesundheitsverläufe durch PsyCap.

Die zweite prospektive Studie untersuchte die Beziehung zwischen der Anwendung von StaffCare durch die Schulleitung vor der Pandemie und der Resilienz der Lehrkräfte während der COVID-19-Pandemie. In dieser Studie wurden sowohl PsyCap als auch das psychosoziale Sicherheitsklima als Mechanismen für diese Beziehung herangezogen. Die Ergebnisse der Studie für eine Stichprobe mit vollständigen Datensätzen von *N* = 107 Lehrkräften stützen nicht den direkten Zusammenhang zwischen StaffCare und Resilienz. Die Hypothese eines indirekten Zusammenhangs zwischen StaffCare und Resilienz durch

PsyCap und das psychosoziale Sicherheitsklima als parallele Mediatoren fand jedoch empirische Unterstützung. Lehrkräfte, die ihre Schulleitung vor der Pandemie als bewusster und rücksichtsvoller in Bezug auf Gesundheitsthemen wahrnahmen, berichteten auch über ein besseres psychosoziales Sicherheitsklima in ihrer Schule und ein höheres individuelles PsyCap, was es ihnen letztlich ermöglichte, trotz der Stressoren während der ersten Welle der Pandemie weniger belastet zu sein.

In der dritten Studie verlagerte sich der Schwerpunkt von den Lehrkräften auf die Schulleitungen als Führungskräfte und konzentrierte sich auf die situativen und individuellen Antezedenzien von StaffCare, um die dritte Forschungsfrage zu beantworten. Auf der Grundlage des JD–R Modells wurden die beruflichen Ressourcen und Anforderungen als Antezedenzien für SelfCare der Führungskräfte als eine Art persönlicher Ressource betrachtet. Darüber hinaus stellte ich die Hypothese auf, dass die SelfCare der Führungskräfte die Beziehung zwischen Arbeitsressourcen und Arbeitsengagement sowie zwischen Arbeitsanforderungen und emotionaler Erschöpfung vermitteln würde. Schließlich wurde StaffCare als Teil der Leistung einer Führungskraft als ein Ergebnis des Motivationsprozesses und des Prozesses der gesundheitlichen Beeinträchtigung behandelt, wie im JD–R Modell vorgeschlagen. Eine wöchentliche Tagebuchstudie mit N = 234 Schulleitungen unterstützte das vorgeschlagene Modell weitgehend. Schulleitungen, die in einer Woche mehr Ressourcen wahrnahmen als in einer anderen, waren in der Lage, mehr SelfCare zu betreiben, was ihnen half, sich intensiver mit ihrer Arbeit zu beschäftigen, und zu ihrer StaffCare beitrug. Die Arbeitsanforderungen und die emotionale Erschöpfung standen jedoch in keinem signifikanten Zusammenhang mit StaffCare auf Wochenebene.

Insgesamt entwickelt diese Arbeit das Verständnis von Resilienz als Ergebnis von StaffCare und den entsprechenden Prozessen sowie den Vorbedingungen, die es Führungskräften ermöglichen, StaffCare

gegenüber ihren Mitarbeitenden auszuüben. Die Untersuchung der drei Forschungsfragen in verschiedenen Stichproben des Schulpersonals hat somit dazu beigetragen, ein umfassendes Bild von HoL in Schulen zu zeichnen, das tiefgreifende praktische Auswirkungen auf dieses spezifische Berufsfeld hat.

General Introduction

Educators' mental health appears to be highly endangered by the inherent stressors that accompany their occupation (Schaarschmidt, 2005). One prior study revealed that 30% of teachers in German schools exhibited critical scores concerning their mental health (J. Bauer et al., 2007), while 32% of the participants in a related investigation reported symptoms of burnout (Scheuch et al., 2016). Previous studies have also supported a positive relationship between specific stressors occurring at schools with self-reported depressive symptoms and even cardiovascular disease in teachers (Borrelli et al., 2014; Seibt et al., 2012). Within the population of teachers, novice teachers as a specific group are confronted with a plethora of new and additional stressors. Some authors have described the transition from university-based learning to teaching in a school as extremely stressful; moreover, although each federal state within Germany features structured induction programs that support the introduction to occupational life, novice teachers often experience reality shock when entering school life (Klusmann et al., 2012). This phenomenon encompasses changes in attitudes and behaviors as well as strain and symptoms of burnout that occur when novice teachers are confronted with the reality of teaching (Klusmann et al., 2012). Along these lines, Darius et al. (2021) reported that 31% of a sample of novice teachers showed mental health impairment and symptoms of burnout.

Such findings form a background that points to an urgent need to investigate the factors that contribute to maintaining teachers' health. Along these lines, Inceoglu et al. (2018) offered a description of leadership as a pivotal aspect of work related to health and well-being. Traditionally, research examining the area of leadership has focused on the influence of leadership on performance; however, health as an outcome has grown increasingly relevant in recent decades. Multiple literature reviews and meta-analyses have supported the notion that various leadership constructs, such as transformational leadership,

employee- or relations-oriented leadership, and leaders' social support, can have a health-enhancing effect (Gregersen et al., 2011; Kuoppala et al., 2008; Montano et al., 2017; Skakon et al., 2010). Encouraged by these findings, researchers have proposed different concepts of healthy leadership and empirically demonstrated these approaches' positive effects on health and well-being within the past decade (Eberz & Antoni, 2018; Franke et al., 2014; Jiménez, Winkler, & Bregenzer, 2017). To date, scholars have barely begun to apply these developments in the context of leadership in schools in Germany despite strong reasons that support such an endeavor. As mentioned, teachers' work appears to put their health at risk. Although a broad stream of literature problematizes this phenomenon (for an overview, see García-Carmona et al., 2019), the suggestions for countermeasures have often focused on the individual's resources (e.g., Mansfield, 2021). However, previous studies conducted in the school context have demonstrated that applying transformational leadership to this setting is feasible. For example, a meta-analysis revealed that transformational leadership in schools positively affected various outcomes, including teachers' job satisfaction, the teachers' evaluation of school effectiveness, and even student achievement (Chin, 2007). Moreover, the average effect size of the relationship between transformational leadership and job satisfaction within the school context (ρ = .71; Chin, 2007) was even higher than the effect size for the same relationship in a meta-analysis of the general working population (ρ = .43; Dumdum et al., 2013). These findings suggest that healthy leadership should also be applicable in the school setting. Finally, since leadership is trainable (Kelloway & Barling, 2010) it presents an excellent opportunity for interventions. A necessary prerequisite to tailoring interventions for school principals or other leaders within the educational context involves gaining a deeper understanding of the particular aspects of leadership that are relevant to teachers' health and well-being. In conclusion, exploring antecedents and outcomes of healthy leadership in schools is a worthwhile endeavor.

Therefore, this thesis presents an evaluation of the concept of health-oriented leadership (HoL; Franke et al., 2014) in three subpopulations within the broader population of school staff: novice teachers, teachers, and school principals. The goal is to test whether HoL has beneficial effects in all these subpopulations, thus encouraging the application of HoL in everyday school life and development programs for school staff. In particular, within the concept of HoL, a distinction is made between health-oriented self-care (SelfCare) and a leader's follower-directed health-oriented cognitions and behaviors (StaffCare; Franke et al., 2014).

Earlier research has primarily focused on the outcomes of leadership at the followers' level or, alternatively, the antecedents of leadership. However, Harms, Credé, et al. (2017) argued strongly in favor of bringing together these two perspectives to model the whole leadership process. Therefore, this thesis proposes an overall model of antecedents and outcomes of HoL as has been presented and tested in three empirical studies. Based on this process model of leadership, the answers to the three main research questions offer a vital contribution to research on healthy leadership. First, I aim to enlarge the scope of outcomes of StaffCare by testing the relationship of StaffCare with two different conceptualizations of employee resilience. In following this approach, my intent was to overcome the problem identified in Rudolph, Murphy, and Zacher's (2020) assertion that by "defining and measuring 'healthy leadership' in terms of its beneficial effects on these outcomes" (p. 2), the leadership behavior is confounded with the intended outcome. Moreover, previous studies on HoL have primarily considered burnout/emotional exhaustion (e.g., Kaluza et al., 2021), motivational aspects such as job satisfaction (e.g., Krick et al., 2021), or physical health (e.g., Klug et al., 2019) as outcomes. This breadth of outcomes already represents strong evidence supporting the positive relationship between StaffCare and employee well-being. In today's turbulent and quickly changing working environment, employees, teams, and organizations must adapt to upcoming adversities, thereby

displaying their resilience (King et al., 2016). This thesis begins by establishing a basis for understanding resilience by building upon the foundation laid down by two influential articles that summarized and organized the field of resilience research (Britt et al., 2016; D. M. Fisher et al., 2019), delineating resilience-promoting factors (or capacity for resilience) from the resilience process and resilience as an outcome (or demonstration of resilience). Hence, the concept of demonstration of resilience here is defined as "a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228). I aim to apply the two most popular operationalizations of demonstration of resilience in the field of clinical resilience research to the study of workplace resilience. One of these approaches concerns the trajectories of adaptation during or after stressful events (Galatzer-Levy et al., 2018; applied in Study I), while the other entails the deviation from the regression of stressor load with strain (Kalisch et al., 2015; applied in Study II).

Second, although various authors have well-established the main effect from healthy leadership on the health or well-being of employees (e.g., Franke et al., 2014; Horstmann, 2018; Kaluza, Schuh, et al., 2020), only a small array of mediators has been studied so far. This situation is problematic since the study of mediators is the only way to uncover the mechanisms behind this relationship. Inceoglu et al. (2018) pointed out that the understanding these mechanisms remains elusive in the general field of leadership research. Thus, studying mediators contributes to the theoretical development of leadership research (Inceoglu et al., 2018), specifically because integrating mechanisms can make theoretical models more specific and comprehensive. In addition, solid implications for training and workshops can be derived by understanding the process by which leadership unfolds its beneficial effect on employees (Inceoglu et al., 2018; Wegge et al., 2014). Therefore, this thesis will present an examination of one mediator at the individual level (positive psychological capital; PsyCap) and one at the school level (psychosocial safety climate) in the relationship between

StaffCare and employee resilience. The choice of these mediators is based on Britt et al.'s (2016) resilience model. Both internal and external resources can contribute to the demonstration of resilience. Since PsyCap has been the subject of extensive empirical studies (for an overview, see Luthans & Youssef-Morgan, 2017) but has not previously been related to healthy leadership or demonstration of resilience, I chose this higher-order factor of personal resources as the first mediator. Meanwhile, psychosocial safety climate is conceptually very close to healthy leadership since it includes those aspects of the working environment that are protective of employees' mental health (Dollard & Bakker, 2010). Moreover, a working environment where employees feel safe to raise concerns and participate in the discussion of health-related topics should be conducive to a demonstration of resilience.

Third, consideration of the positive effects of StaffCare on followers' health highlights the growing importance of studying the antecedents of StaffCare. In the words of Kaluza, Boer, et al. (2020), "Such knowledge would not only benefit leaders but also their employees and thus the entire organization" (p. 35). With reference to the job demands–resources (JD–R) model, it is my contention that StaffCare can be seen as one form of performance a leader shows, thus constituting a distal outcome of the health impairment process and the motivational process within the JD–R model (Bakker & Demerouti, 2017). Along these lines, Kaluza, Boer, et al.'s (2020) meta-analysis supported the notion of a consistent relationship between leadership and leaders' well-being. That said, the authors did not test the causal direction and only presented correlational meta-analytic results. Following the theoretical development of the JD–R, which suggests a causal order from strain/motivation to leadership, I will test this direction within this thesis. Moreover, the thesis will seek to further the knowledge concerning the HoL model by integrating leaders' SelfCare as a mediator. Although the authors of the HoL model assumed a relationship between the SelfCare of a leader and their StaffCare (Franke et al., 2014), only one correlational finding on this positive

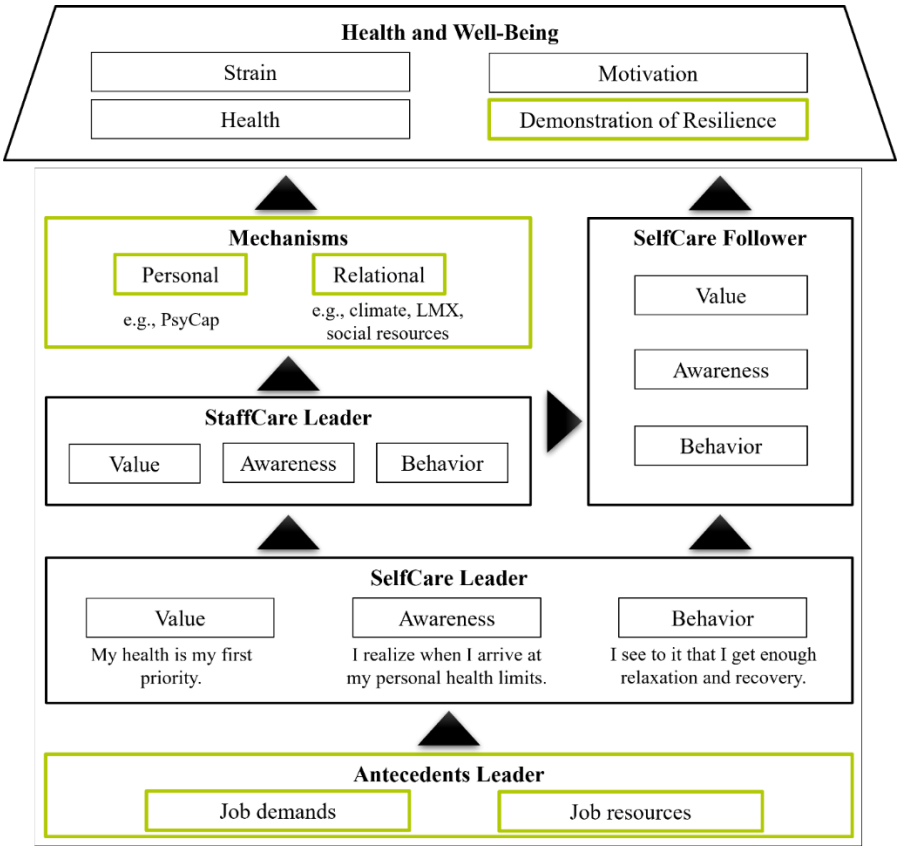
relationship has emerged in support of this assumption (Pundt & Felfe, 2017). Therefore, this thesis proposes and consequently tests a serial mediation model leading from the job characteristics of the school principal to their StaffCare through leaders' SelfCare and strain or motivation.

Thus, overall, the theoretical contribution of this thesis is threefold. First, the concept of HoL will be further validated by broadening the scope of outcomes. Moreover, bringing together the study of resilience with leadership shifts the focus away from individual aspects contributing to resilience in the face of adversity to leadership as an environmental resource, thus complementing personal predictors of employee resilience. Second, understanding the mechanisms between StaffCare and resilience is both theoretically and practically meaningful. Introducing PsyCap and psychosocial safety climate as mediators allows the question of "what a leader does" to be untangled from the process whereby a leader influences their followers. Third, this thesis proposes an integration of the HoL model with the JD–R model and tests this proposal through studying working conditions and the leaders' well-being as antecedents of StaffCare. This study represents the first attempt to test concrete assumptions of these two theories in conjunction. Figure 1 illustrates the study's theoretical contribution with the proposed extensions of the original HoL model.

In the following chapters, I lay the foundation for the analysis that follows by providing an overview of the leadership literature in general, along with a critique of this field of leadership and consideration of the research on leadership in the school context. Next, the focus shifts to the relationship between leadership and health, opening with a summary of concepts related to healthy leadership and followed by an in-depth description of the HoL model, forming the basis for developing the research model. Next, I present the three studies conducted to answer the research questions. Finally, the general discussion summarizes and discusses the results with reference to earlier empirical

findings. Additionally, this section of the thesis describes the study's theoretical and methodological contributions and suggests future research ideas based on a consideration of the study's limitations. The thesis concludes by offering practical implications based on the study results.

Figure 1 *Theoretical Contribution to the HoL Model*



Note. Figure based on Franke et al. (2014). Parts of the model that are suggested based on this thesis' theoretical development and empirical studies are highlighted in green.

The Field of Leadership Research and Leadership in Schools

Literature examining leadership abounds, and scholars have proposed a multitude of different leadership concepts (Martin et al., 2019). Some of these approaches have a large conceptual overlap (such as ethical and transformational leadership; Hoch et al., 2018), while others cover very distinct topics (such as abusive supervision and healthy leadership). However, an overarching definition of leadership that applies to most of these concepts and provides the foundation of this thesis is that leadership is a "social process of mutual influence among actors that is in service of accomplishing a collective goal" (DeRue, 2011, p. 128). However, this definition does not include the means used to exert this influence. The terms leadership and management are often used interchangeably in research and practice (Kotterman, 2006). Specifically, in this thesis, I follow Nebeker and Tatum's (2002) reasoning that management entails the aspects of planning, controlling, organization, and supervision. In contrast, leadership is focused on developing strategies and visions along with inspiring and motivating employees (Kotterman, 2006). Although one person can incorporate both roles into a practical function that integrates the responsibilities of manager *and* leader, Kotterman (2006) maintained that these roles should be separated for greater effectiveness. However, the concept of leadership has evolved since Kotterman's study was published. Nowadays, many employees function in a role as a leader over the course of their working lives (e.g., serving as the leader of a project team; Vullinghs & Dóci, 2020), and new ideas such as distributed or shared leadership have emerged (DeRue, 2011). Thus, the claim to separate these roles no longer applies in practice and may be viewed as an arbitrary theoretical distinction. However, research can and should focus on one of those roles without complicating the discussion by combining the two roles since each role in its own right is already extremely complex. Accordingly, this thesis focuses on the leadership exerted by school principals (and teaching staff in the study seminar), intentionally excluding their role as

managers from the discussion. This approach contrasts with intensive research from the field of educational science (research on school effectiveness and organization of schools) that centers around the school principal as a manager (see, for example, Feldhoff et al., 2014).

A Brief Glance at the History of Leadership

To position the topic of this thesis within the leadership literature, I will present in this section a quick overview of the history of leadership research (cf., Kerschreiter et al., 2018; Martin et al., 2019; Vullinghs & Dóci, 2020). Up until the 1940s, the idea of specific traits that distinguish a leader has been prevalent (leader characteristics; e.g., Tarnopol, 1958). In the 1950s and 1960s, the focus shifted away from the trait approach to behavioral concepts of leadership, such as consideration (a leader's concern, respect, support, and caring toward followers; Judge et al., 2004) and initiating structure (definition and organization of the individual's role as a leader and the roles of followers, focusing on goal attainment and communicative structures; Judge et al., 2004). To this point, leadership researchers at Ohio State (Stogdill, 1950) and Michigan University (Likert, 1961) have been the driving force of conceptual developments in leadership research. Later researchers proposed contingency theories that led to studies with a more pronounced examination of contextual factors (Fiedler, 1978). Subsequently, in the 1980s and early 1990s, the concepts of transactional and transformational leadership emerged, spearheaded by Bass (1985; based on Burns, 1978). Avolio and Bass (1991) then integrated these concepts within the full range leadership model. Although Dansereau et al. (1975) had introduced the concept of leader–member exchange earlier more than a decade elapsed before this research stream on the relationship between followers and leaders gained momentum in the 1990s (Graen & Uhl-Bien, 1995).

Around the turn of the millennium, Tepper (2000) proposed the concept of abusive supervision. Until that time, negative leadership concepts or behaviors had been under-researched; specifically, Tepper

(2000) argued that negative leadership was not the same as non-leadership (cf. Kerschreiter et al., 2018). Contemporaneously, various groups of authors proposed differing concepts of leadership with the common theme of being value-based. These concepts included authentic (Avolio & Gardner, 2005), ethical (Brown & Treviño, 2006), and servant (Liden et al., 2015) leadership. Another category of leadership concepts that emerged during the 2000s entailed theories on distributed, collaborative, or shared leadership (Alvarez & Svejenova, 2006; Kramer & Crespy, 2011) and social constructionist theories (Fairhurst & Grant, 2010).

Based on the positive psychology movement (Seligman & Csikszentmihalyi, 2000), Luthans (2002) suggested that scholars should increasingly focus on positive organizational behavior and human strength. Together with calls to study health at work (D. Nelson & Cooper, 2005), this view led to a large research stream establishing the connection between leadership and health (e.g., Montano et al., 2017; Skakon et al., 2010). Encouraged by these findings and motivated by the increasing societal importance attributed to health at work (Badura et al., 1999; DIE ZEIT, 1998), various authors have proposed different concepts of healthy leadership within the past decade (for an overview, see Boehm et al., 2016; Rudolph, Murphy, & Zacher, 2020).

This short synopsis of the history of leadership research underscores the existence of a multitude of ideas concerning the characteristics of "good" leadership. As one of the youngest developments in this field, healthy leadership also raises a variety of open questions that demand answers, both now and in the future.

Critical Discussion of Leadership Research

Scholars have expressed numerous criticisms against the field of leadership research, citing such issues as its proliferation, deficient theoretical integration, definition of leadership by its desired outcomes, and open questions surrounding the variability of leadership (behaviors) and of the causal order. This section will examine these weaknesses with

the aim of positioning the studies included in this thesis in the current discussion.

A major criticism regarding leadership research concerns its proliferation (Banks et al., 2018), which stems from shortcomings of theoretical integration (Avolio, 2007; DeRue, 2011). For example, a meta-analytical review by Banks et al. (2018) showed that three relatively recent and morally based leadership constructs—authentic, ethical and servant leadership—are highly correlated among each other. Furthermore, the authors noted that neither convergent nor discriminant validity was supported by confirmatory factor analysis within the meta-analysis. This finding raises the question as to whether these leadership behaviors are distinct. Thus, researchers who wish to prevent further unnecessary proliferation of leadership constructs should try to avoid considerable overlap with other leadership constructs when presenting a new construct and should demonstrate the distinctiveness of the new construct to related earlier leadership constructs (Banks et al., 2018). As I will show later, the authors of the HoL model (Franke et al., 2014) and the authors of other concepts of healthy leadership have mostly followed this advice

Moreover, since each newly developed leadership concept is treated as its own theoretical framework, overarching ideas of how leadership exerts its influence on followers are not provided (Wegge et al., 2014). For the most part, various authors have constructed each new concept of leadership so that it phenomenologically describes some leadership behaviors that are integrated into the concept without specifying theory-based mechanisms. Researchers have applied multiple approaches to counteract the proliferation of leadership research and at the same time help develop a theory of mechanisms between leadership and follower outcomes in recent years by presenting overarching models of leadership. Representative models include Yukl et al.'s (2002) leadership taxonomy, DeRue et al.'s (2011) “integrated model of leader traits, behaviors, and effectiveness”, J. B.

Lovelace et al.'s (2019) charismatic, ideological, and pragmatic model of leadership, and Banks et al.'s (2018) integrative theoretical framework of leader behaviors, correlates, and outcomes. The overarching idea of these models is that leadership (behavior), mediators, moderators, and outcomes can be grouped into categories. However, since they are post-hoc created models, each featuring a narrow scope of leadership constructs, they offer limited usefulness to derive specific hypotheses on the mechanisms and predictors of healthy leadership. Despite these concerns, it seems useful to position the newly proposed mediators of this thesis (Studies I and II) within this form of categorization of mechanisms.

A second major critique of leadership research is that the leadership behavior is defined by its desired outcome (J. B. Lovelace et al., 2019; D. van Knippenberg & Sitkin, 2013). However, since the study of leadership is very close to practice and inspired by questions originating in leaders' everyday life, starting with a desired outcome and then building a conceptualization of leadership that aims at enhancing the outcome is a valid approach (Franke et al., 2011). Using the desired outcome as the basis for building a conceptualization of leadership that will enhance outcomes is arguably the only way for empirical research to guide leaders toward behaviors and cognitions that specifically aim at the outcome they consider necessary within their team (Franke et al., 2011; Franke et al., 2014). In this light, the goal of further research on specific leadership concepts would be to present practitioners an array of helpful leadership behaviors and cognitions, allowing leaders to choose, depending on the situational needs and the needs of the individual follower, which form of leadership to show. Along these lines, HoL has been developed with the specific goal of enhancing followers' health. Nonetheless, I agree with critiques of leadership research highlighting the necessity to clarify conceptual overlaps between different approaches to leadership in order to purify the theories and build a profound theoretical basis that supports further empirical research.

A third critique of the research in the field of leadership was raised by Alvesson (2019), who pointed out that leadership is still seen as a stable construct while ignoring the context in which it takes place. In supporting this argument, the author went on to name some examples of dramatic changes of leadership when the social context changes. Beneath this general change of context (for example, through change of position), leaders' experience of demands and the resources available to them will also vary. Therefore, one of my aims in this thesis is to illustrate how situational aspects of the working environment influence the behavior and well-being of leaders (Study III).

A difficulty arising with the prevalent study designs characterizing leadership research is that of causality. For example, Hunter et al. (2007) observed that the typical leadership study employs correlational or regression analysis to answer the research question. Moreover, Dinh et al. (2014) and Vullinghs and Dóci (2020) emphasized that the field of leadership research is dominated by cross-sectional survey studies. None of these methods allow for causal inference. In fact, the strongest methodological approach to show causality is an experiment. Accordingly, one form of study design used in leadership research is the use of vignette studies (e.g., Klebe, Felfe, & Klug, 2021a; B. van Knippenberg & van Knippenberg, 2005). However, since the ecological validity of these experiments is limited, within this thesis, I have handled this causality problem by conducting longitudinal studies, using predictor, mediator, and outcome at different points in time and controlling for the previous level of mediators and outcomes. Moreover, alternative models should be tested to rule out alternative explanations (Hunter et al., 2007). I employed this approach in Study I by adding the more innovative person-centered approach to the traditional variable-centered analysis. Since the samples of all three studies stem from the population of people working in schools, in the next section, I will provide an overview over the topic of leadership in schools.

Leadership in the School Context

A principals' role entails many different tasks, and the leadership behavior expected of them is very complex. Germany is currently experiencing a trend toward a greater independence of schools from the federal state government. As a result, more emphasis is being placed on the competencies of the principal (H. E. Klein, 2008). The literature has defined different tasks that the principal's role entails (summarized by Semling & Zölch, 2008). Specifically, researchers have formulated the expectation that principals initiate and promote change, develop a shared understanding of goals (Huber, 1999) and problem-solving (Buhren & Rolff, 2002), foster cooperation and cohesion between teachers (Huber, 1999), develop a learning culture, and promote human resources development (Buhren & Rolff, 2002). Moreover, Dubs (2005) advised that principals should practice a cooperative-situational leadership style overall. This style incorporates such tasks as having an attitude that reflects a long-term orientation (e.g., creating visions, developing supporting conditions), defining goals (e.g., developing the profile of the school), meeting expectations (e.g., reaching goals), providing support (e.g., supporting the individual teacher in the course of personnel development) and having a well-defined attitude. All these behaviors and tasks fit within the definition of leadership.

Schools differ in some ways from other organizations (Buhren & Rolff, 2002; Semling & Zölch, 2008). For example, the level of qualification in schools is high in that nearly all the staff is educated academically. Next, the principals see themselves more as peers than as leaders, while teachers see themselves as members of a homogenous group; thus, differences in their performance are nearly invisible. In addition, teachers have a large amount of autonomy, which leads to a degree of isolation in their work. As another factor, cooperation and collaboration are often not supported or required. Relevant topics are most often discussed using informal communication channels since the rigid organization that characterizes meetings does not leave enough

scope for topics that may be of interest to individual teachers (Semling & Zölch, 2008). Moreover, principals encounter the difficulty that they belong to the educational staff, which is characterized by informal communication and informal mechanisms of coordination. Nevertheless, at the same time, principals are required to execute managerial and leadership tasks (Wülser, 2008). Schools can be seen as loosely coupled systems (Weick, 1976) with a high autonomy of the staff members, and grassroots democratic committees predominantly organize them. This situation leads to reservations on the part of teachers about the idea of personnel management instruments (Semling & Zölch, 2008).

Much of the early research in the field of educational administration focused on determining which tasks principals must accomplish and how stressful these tasks are for the principal (Huber, 2011; Rosenbusch et al., 2006). Next, scholars' interest shifted toward school improvement, school effectiveness, and the evaluation of schools (Dormann et al., 2016; Huber, 2011). Comparatively, research on leadership in schools is relatively young and only became a focal research topic beginning in the 1990s (e.g., Leithwood & Poplin, 1992; Leonard & Leonard, 1999; see also overviews given by Gumus et al., 2018; Hallinger & Kovačević, 2019; Huber, 2011). Transformational leadership by the principal is often studied in terms of its relationship with teacher outcomes, such as organizational commitment (Harazd & van Ophuysen, 2011; Ling & Ibrahim, 2013; Ross & Gray, 2006), commitment to the teaching profession (Ling & Ibrahim, 2013), satisfaction (Harazd & van Ophuysen, 2011; Maheshwari, 2021), performance (Maheshwari, 2021), well-being, burnout, and sick leave (Harazd & van Ophuysen, 2011). Other leadership concepts of interest are transactional leadership and its relationship with burnout and sick leave (Harazd & van Ophuysen, 2011) or job satisfaction and performance (Maheshwari, 2021), as well as how passive-avoidant leadership relates to commitment, satisfaction, well-being, burnout, and sick leave (Harazd & van Ophuysen, 2011). Examination of these

studies reveals that, in general, the prevalent leadership concepts from the field of organizational psychology are applicable in the school context; specifically, the expected relationships with outcomes shown in general leadership research can be replicated in samples of teachers.

Pertaining to the research questions and core constructs of this thesis, further empirical results from the school context are interesting. Salutogenic leadership, defined as comprehensible, manageable, and meaningful leadership actions, has been shown to negatively relate to teachers' strain (Harazd et al., 2009). Moreover, multiple studies have reported the relevance of principal support or supportive leadership in schools to teachers' emotional exhaustion (Collie, 2021; Maas et al., 2021), somatic burden and stress (Collie, 2021), and teachers' engagement (Klusmann et al., 2008). Moreover, a school's general climate has been shown to relate negatively to emotional exhaustion and depersonalization and positively to personal accomplishment (Grayson & Alvarez, 2008).

Overall, these empirical findings point to principal's influence on attitudes, behaviors, and health of teachers. That said, these studies, while set in the school context, mostly employed cross-sectional designs (see Maas et al., 2021, for an exception), which limits the strength of the evidence. Nonetheless, the summary of the literature points to the existence of some research on leadership and health in schools while admitting that knowledge or more rigorous study designs from the field of leadership research have seldom been applied to this context. Therefore, this study employs the concept of HoL to better understand how principals can adjust their leadership behavior and attitudes with the goal of sustaining and fostering the health and well-being of teachers.

Leadership and Health

Germany's Occupational Safety and Health Act (Arbeitschutzgesetz; ArbSchG) obliges employers to ensure the health and safety of their employees. This obligation also addresses the

behavior of leaders within the organization (§3, Abs. 2 ArbSchG, 1996/last amended by Article 12 of the Act of November 22, 2021 - BGBI. I S. 4906). Thus, the law itself establishes a relationship between leadership and health and safety. A definition of health is a prerequisite for discussing the influence of leadership on health, which this thesis will now provide. The occupational health literature often presents the use of well-being and (mental) health as synonyms. This usage also fits with the definition proposed by the World Health Organization (2006), which presents an understanding of health as mental, physical, and social well-being in lieu of merely defining health as the absence of disease. Furthermore, according to Wright et al. (2017), well-being is a multidimensional concept that includes positive states, such as work engagement, and states of ill-being, such as emotional exhaustion. Each of the three empirical studies included in this thesis presents a different chosen form of health or well-being. In the first study, the development of physical and mental health within a specific time frame represents the adaptation of employees to their career entry phase. In this case, physical and mental health are defined as physical and social functioning, low reported pain, high vitality, and an overall perception of the individual's physical and mental health (Ware et al., 1996; Ware & Sherbourne, 1992). Meanwhile, in the second study, irritation as a measure of strain in response to stressor-exposure has been chosen as the area of interest. Irritation can be defined as the "subjectively perceived emotional and cognitive strain in context of the working environment" (Mohr et al., 2005, p. 44). Lastly, the third study measured emotional exhaustion and work engagement as indicators of leaders' strain and well-being. Emotional exhaustion is the core facet of burnout and has been defined as "feelings of being emotionally overextended and exhausted by one's work" (Maslach et al., 1996, p. 194). Work engagement has been developed as a countering force to emotional exhaustion and has been described as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74).

Two widely applied stress theories in the field of occupational health psychology, the conservation of resources (COR) theory (Hobfoll, 1989; Hobfoll et al., 2018) and the JD–R model (Bakker & Demerouti, 2017; Demerouti et al., 2001) are useful in proposing that leadership exerts influence on the health and well-being of employees. Notably, both theories categorize leadership as a resource. Hobfoll (1989) defined resources as "those objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies" (p. 516). In order to gain new resources or offset resource loss, people employ resources that are at their disposal, either within themselves or from their environment. Although in the original 1989 work, Hobfoll did not mention leadership and posited that social support as a resource did not fit the author's categories of resources but was rather a means to acquire other valued resources, later work specifically discussed leadership as a source of further resource gain for employees in the case of positive forms of leadership as well as a source of resource loss in the case of abusive leadership (Hobfoll et al., 2018). In comparison, the JD–R model includes a definition of resource as "those physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning, and development" (Bakker & Demerouti, 2017, p. 274). Based on this latter definition, leadership behavior perfectly fits within the category of resources. Positive, constructive leadership specifically aims at achieving work goals; moreover, leaders aim to exert influence on the demands of their followers so that they can optimally fulfill their tasks. Additionally, the relations-oriented leadership styles presented earlier specifically target the followers' personal development. Overall, the JD–R model theorizes that leadership is a resource preceding job demands and resources; moreover, empirical evidence supports this notion (for an overview, see Bakker & Demerouti, 2017).

On another note, both theoretical frameworks specify that these kinds of resources positively influence the health and well-being of employees. One major assumption within COR theory is that people "strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources" (Hobfoll, 1989, p. 513). COR theory predicts that people who are under the influence of an acute stressor will strive to minimize resource loss; contrariwise, when not confronted with stressors, people aim to foster and enhance their resources in order to be better equipped for future stressors (Hobfoll, 1989). Briefly stated, the availability of resources enhances well-being, while the (potential) loss of resources elicits strain (Hobfoll et al., 2018). Moreover, the authors believed that positive leadership would enhance followers' work engagement because it constitutes a resource in itself (Hobfoll et al., 2018). Specifically, the authors referred to the crossover model to argue for the crossover of resources from leaders to followers and its positive effects on work engagement, well-being, and resilience of employees (Hobfoll et al., 2018). In comparison, the authors of the JD–R model posited that leadership exerts an influence on followers' motivation and strain via shaping the job demands and resources of employees. Thus, leadership is seen as an antecedent of the health-impairment process and the motivational process suggested in the JD–R model (Bakker & Demerouti, 2017).

Meta-analytical results have identified the relationship between established leadership constructs and health/well-being of employees. For example, a meta-analysis by Harms, Credé, et al. (2017) focused on transformational leadership, leader-member exchange (LMX), and abusive supervision and their relationship to burnout. The findings indicated that transformational leadership and LMX are negatively related to burnout, while abusive supervision displayed a positive relationship with follower burnout. However, the number of studies included in the meta-analysis was relatively small (2–25 studies), pointing to the need for further examining of follower strain or well-

being as an outcome of leadership. Another meta-analysis by Montano et al. (2017) had a broader scope, investigating the relationship of five different leadership constructs (transformational, relations-oriented, task-oriented, destructive, and LMX) with six categories of mental health (affective symptoms, stress, burnout, psychological functioning, well-being, and health complaints). According to the authors' analysis, nearly all relationships between the leadership constructs with each health outcome were significant. However, the results were inconsistent for health complaints as an outcome, since relations- and task-oriented leadership as well as LMX were significantly related to health complaints, while transformational or destructive leadership and emotional interaction were not (Montano et al., 2017). A literature review by K. A. Arnold (2017) investigated transformational leadership as a predictor of employee health and well-being. Although most studies reported in the review found a positive relationship between transformational leadership and employee health and a negative relationship with strain, the results for burnout as an outcome were inconclusive (K. A. Arnold, 2017). Overall, these results are in line with earlier meta-analytical findings having a smaller scope as well as the results found in various literature reviews (Gregersen et al., 2011; Kuoppala et al., 2008; Nyberg et al., 2005; Schyns & Schilling, 2013; Skakon et al., 2010).

One major criticism about studies concerning the relationship between established leadership constructs and mental health is that these leadership constructs were developed with the aim of enhancing followers' performance (Nielsen & Taris, 2019), effort, and motivation (Bass, 1995). Therefore, fostering followers' mental health with these approaches represents only a side effect of the originally intended effect. This phenomenon is also reflected in the literature on the dark side of leadership (e.g., Itzkovich et al., 2020) and the varying effect sizes of the relationship of transformational leadership with well-being outcomes of employees (Montano et al., 2017). Furthermore, various authors have advanced theoretical and empirical arguments supporting

the need for specificity of constructs. For example, Ajzen and Fishbein (1977) maintained that the relationship between attitudes and behaviors was only plausible when the target element of the attitude corresponded to the target element of the behavior. Adapting this line of reasoning to concepts of leadership leads to the logical conclusion that when the target of the leadership behavior in question (e.g., transformational leadership) is employee performance, then a relationship of this behavior with the health of the employees might happen but is not very plausible. In contrast, leadership attitudes and behaviors that target health are more suited to enhance the health of employees. In the field of research on organizational climate, the same line of reasoning has been presented by Schneider (1975; Schneider et al., 2013). Specifically, the authors in the later study asserted that "the bandwidth and focus of climate measures should match the bandwidth and focus of the outcome to be predicted" (Schneider et al., 2013, p. 365) and underscored the need to begin the research process by identifying the outcome that should be changed and then developing an idea of climate (or leadership) that would be suited to reach this goal.

These shortcomings of the idea of simply relating established leadership constructs to health and well-being, along with the theoretical reasons for higher specificity, have led to the development of different concepts of health-oriented or health-specific leadership. These ideas will be reviewed in the next section.

An Overview of Concepts of Healthy Leadership

Within the last decade, scholars have developed and proposed multiple approaches to leadership that have been specific to health. Since the literature presents an inconsistent use of the terms health-specific, health-oriented, and health-promoting leadership, in this thesis, I will refer to this global field of leadership, specific to health, as healthy leadership (cf. Rudolph, Murphy, & Zacher, 2020) and to the concept that has been applied in the three studies of this thesis as health-oriented leadership (HoL; Franke et al., 2014). Approaches that

focus on healthy leadership and offer unique, original conceptual development include health-specific leadership (Gurt et al., 2011), health- and development-promoting leadership (Vincent, 2011), HoL (Franke et al., 2014), health-promoting leadership (Jiménez, Bregenzer, et al., 2017), and the systemic salutogenic interaction model (Eberz & Antoni, 2016) and are presented in chronological order to offer an overview of the topic at hand.

One of the first approaches to healthy leadership was proposed by Gurt and Elke (2009) and Gurt et al., (2011). The authors in both studies combined health-specific leadership with other domain-specific leadership concepts—for example, safety leadership—and labeled the new concept health domain-specific leadership. While Gurt et al. (2011) did not propose a detailed theoretical background for their conceptualization of health-specific leadership, they defined the term as "the leaders' explicit and therefore visible consideration of and engagement in employee health" (p.110).

In comparison, Vincent's (2011, 2012) approach involving leadership that promotes health and development was based on the assumption that leadership behavior has the potential to influence different aspects of work and working conditions, which in turn can be health-promoting or health-hampering (see also Gregersen et al., 2011; Rigotti et al., 2014). Therefore, instead of modeling leadership behavior as abstract concept, Vincent focused on 14 specific working conditions that could be grouped into the following three factors: supportive leadership, development-oriented leadership, and overdemanding leadership. The proposed factor structure found support in two studies (Vincent, 2011, 2012). After a median split of the three factors in a sample of 1,278 employees in the field of information and communication technology, the author demonstrated that leaders with high supportive and development-oriented leadership behavior as well as low overdemanding leadership had employees with the most positive outcomes. These employees revealed low irritation, low emotional

exhaustion, few psychosomatic health complaints, high work ability, and high occupational self-efficacy (Vincent, 2011).

At the same time, and within the same edited volume, Franke et al. (2011) presented their model of HoL. The model's main tenet is that both self-leadership and the leadership of leaders toward their followers can be health-oriented and are relevant to the individuals' health. The researchers used the term SelfCare to refer to the health-oriented and self-directed attitudes, values, and behavior of leaders and followers. This aspect of the model conveys the notion that employees should take care of their own resources, strain, and health in the workplace (Franke et al., 2011). The authors also suggested that leaders' SelfCare can serve as a role model for their followers. Meanwhile, StaffCare refers to the cognitions and actions of leaders to actively nurture the health of their employees, providing the necessary resources and limiting the level of demands. The next chapter will provide a more detailed description of the HoL concept and its empirical evidence.

More recently, Jiménez, Bregenzer, et al. (2017) proposed a slightly different approach of health-promoting leadership while applying the same line of reasoning, building upon the six areas of work life (i.e., workload, control, reward, community, fairness, and value fit) as listed by Maslach and Leiter (2008), apparently critical aspects of work life that correlate with health. Jiménez, Bregenzer, et al. (2017) suggested that followers' health could benefit when leaders were able to produce a fit between followers' expectations and the organization in these areas. This rather indirect influence of leaders on health by creating a fit in the six areas of worklife is complemented with the more direct aspect of health awareness, borrowed from Franke et al. (2014). Studies with different samples support the external validity of health-promoting leadership. In a sample of 430 Austrian employees from different sectors, one study supported a moderate negative correlation of Jiménez, Bregenzer, et al.'s (2017) conceptualization of health-

promoting leadership with social emotional stress as well as a high negative correlation with burnout (Jiménez, Winkler, & Bregenzer, 2017). These relationships were analyzed in more detail in a second study with two independent samples (Jiménez, Bregenzer, et al., 2017). In both samples (comprising 228 and 263 Austrian employees), the same pattern emerged. According to both studies' findings, no direct link was apparent between health-promoting leadership and stress or burnout; instead, the researchers found this relationship to be fully mediated by resources. Conceivably, these findings indicate that the authors' conceptualization of health-promoting leadership mainly influences the resources of followers and has no direct effect on health outcomes. Along the same lines, more recent studies have investigated the moderating role of health-promoting leadership (Bregenzer & Jiménez, 2021) and the relationship with employees' job satisfaction (Bregenzer et al., 2020). One weakness of this concept is the disparity between theory and empirical design. Within their theoretical development, the authors have underscored the importance of a fit of follower and leader values; however, their empirical studies have not implemented this understanding (cf. Rudolph, Murphy, & Zacher, 2020).

The concepts of healthy leadership proposed by Vincent (2011) and Jiménez, Bregenzer, et al. (2017) focus exclusively on the relationship between specific leadership behaviors and followers' health outcomes. Mechanisms such as resources are included in the model, but the context and the circumstances wherein leadership takes place are ignored. Therefore, Eberz and Antoni (2016) proposed the systemic salutogenic interaction model. The authors centered their model on the sense of coherence in the workplace (Work-SoC; Antonovsky, 1988), which they defined as a cognitive schema specific to the working context consisting of the three aspects comprehensibility, manageability, and meaningfulness. Specifically, Eberz and Antoni (2016) proposed four basic mechanisms. First, salutogenic leadership behavior exerts influence on the work-SoC of followers, and vice versa. Second, work-SoC influences leaders' and followers' cognitions, emotions, and goals.

Together, these two mechanisms form the primary system of the model, which is influenced by context factors such as the expectations of leaders higher in the hierarchy, the leaders' working conditions, or organizational culture and goals. Moreover, the personalities of leaders and followers are included in the model as they influence work-SoC along with cognitions, goals, and emotions (Eberz & Antoni, 2016). The approach of Eberz and Antoni (2016) harmonizes well with the claim to view leadership more as a complex phenomenon and consider also reciprocal and recursive relationships made by Hunter et al. (2007). Although the model is fully formed, an empirical examination of the proposed mechanisms remains to be conducted. Since publishing their original proposal, the researchers have conducted one study that investigated the link between leadership behavior and work-SoC of followers, though they did not account for other mechanisms included in their model (Eberz & Antoni, 2018). In 2018, Eberz and Antoni introduced a new operationalization of healthy leadership. As in the concepts of Vincent (2011) and Jiménez, Bregenzer, et al. (2017), the approach included multiple theoretically relevant aspects of leadership and built a few overarching factors out of them. Specifically, Eberz and Antoni (2018) included eight aspects of leadership, from which they constructed the three factors trust, pressure, and incident management. With this concept, again, the problem arises that there is a large gap between theoretical development (Eberz & Antoni, 2016) and empirical evidence (Eberz & Antoni, 2018). Due to the global nature of the theory, it seems difficult to empirically test each proposed mechanism.

Other scholars have presented further approaches to healthy leadership that have not been accompanied by sound theoretical development (for an overview see Rudolph, Murphy, & Zacher, 2020). For example, Anderson et al. (2005) and Barrett et al. (2005) developed instruments to measure (organizational) leadership for health promotion that refer to general "good" management practices. Another example is the "leading by example" questionnaire focusing on leaders'

support of worksite health promotion (Della et al., 2008; Della et al., 2010). Additionally, Boehm and Baumgaertner (2014) defined healthy leadership as encompassing two aspects: prevention behavior (reducing demands, enhancing resources, avoiding overtime) and intervention behavior (in cases of illness; see also Boehm & Dwertmann, 2015).

As Rudolph, Murphy, and Zacher (2020) pointed out, certain common assumptions have arisen concerning the concepts of healthy leadership. The overarching idea of all approaches to healthy leadership is that it contributes to workplace health promotion. A core assumption is that observable differences between leaders' behaviors, values, and attitudes can be used to explain differences in followers' health and that these aspects are trainable. Healthy leadership is categorized as "a meso-level component of health promotion" (Rudolph et al, 2020, p. 8), bridging the gap between organizational practices or policies and the individual follower.

According to the evidence from various empirical studies, healthy leadership explains variance in outcomes over and above transformational or task-oriented leadership and thus counteracts the risk of a further proliferation of leadership constructs (Banks et al., 2018). Gurt et al. (2011) tested both general leadership and their health domain-specific leadership as predictors in one model. However, the data did not support a direct relationship of general leadership or health domain-specific leadership with strain. In contrast, when using the two leadership constructs as predictors of psychological health climate, both paths were significant, thus presenting evidence for the incremental valdity of health domain-specific leadership above general leadership. Moreover, already in the first study presenting the health and development promoting leadership, Vincent (2011) could show that her concept of healthy leadership had incremental validity over transformational leadership in predicting various outcome variables. Later, Vincent-Höper and Stein (2019) used a cross-sectional design to demonstrate that their health- and development-promoting leadership

questionnaire explained additional variance in work engagement, positive well-being, occupational self-efficacy, irritation, and emotional exhaustion over and above transformational leadership (between 8% and 23% additional variance explained). Franke et al. (2014) showed in a longitudinal study that StaffCare within the HoL model explained additional variance in the outcomes state of health, irritation, health complaints, and work-family conflicts when controlling for transformational leadership (between 4% and 6% additional variance explained). For the model of health-promoting leadership of Jiménez, Bregenzer, et al. (2017) a study by Dunkl et al. (2015) evidenced the discriminant validity of transformational leadership and health-promoting leadership. Moreover, since health-promoting leadership and transformational leadership both significantly predicted followers' recovery, this study also lends support for the incremental validity of this concept of healthy leadership (Dunkl et al., 2015). Concerning healthy leadership as proposed within the systemic salutogenic interaction model (Eberz & Antoni, 2016), one study demonstrated that the newly proposed leadership factors explained more variance in work-SoC than many other leadership scales, such as transformational leadership, social support, consideration, and health behavior (Eberz & Antoni, 2018). Adler et al. (2017) employed tailored scales to measure general leadership and health-promoting leadership in a sample of military medical personnel and its relationship to employee burnout. They showed that health-promoting leadership accounted for variance over and above general leadership (1.5% additional variance explained for emotional exhaustion and 2.3 % for depersonalization; Adler et al., 2017). Overall, these results illustrated that healthy leadership is conceptually different from general leadership and is able to explain variance over and above other leadership concepts. All the concepts of healthy leadership with a unique theoretical development have tested this incremental validity and thus counteracted the criticism of unnecessary proliferation of the field of leadership research.

In formulating this thesis, three reasons undergirded my choice to focus on the HoL concept (Franke et al., 2011; Franke et al., 2014). First, the HoL concept offers a conceptually broad idea concerning the meaning of healthy leadership. Specifically, HoL incorporates values, cognitions, and behaviors instead of focusing exclusively on leaders' behavior, which provides a far-reaching picture of aspects of the leader that are relevant to followers' health. Second, the HoL concept was developed using a thorough deductive approach, in contrast to other concepts of healthy leadership that are the product of inductive development. Third, leaders' SelfCare depicts their function as a role model (Klug et al., 2019). This integration of SelfCare as an aspect of healthy leadership facilitates understanding how health-oriented self-care contributes to health-oriented staff leadership (see Study III for a detailed discussion of this relationship).

Health-Oriented Leadership

Franke et al. first proposed the HoL concept in 2011. As stated earlier, the foundation of HoL is based on the differentiation between SelfCare and StaffCare as well as the theorized relationship between these concepts. Both, SelfCare and StaffCare, comprise four aspects: the value of health, health awareness, healthy lifestyle, and health behavior at the workplace. Although the HoL concept emerged relatively recently, a considerable body of empirical evidence supports most of the proposed relationships. In this section, I will present the empirical evidence organized by the proposed relationships between StaffCare, employee SelfCare, and health.

Relationship Between Leaders' Demonstrated StaffCare and Followers' Health. In the findings of two longitudinal studies, StaffCare was positively related to followers' state of health (Franke et al., 2014) and negatively to irritation (Franke et al., 2014), health complaints (Franke et al., 2014; Köppe et al., 2018), and work-family conflicts (Franke et al., 2014). Other cross-sectional studies similarly reported a negative relationship of StaffCare with health complaints (Horstmann &

Remdisch, 2016; Santa Maria et al., 2019), irritation (Klebe, Felfe, & Klug, 2021a), burnout in general (Horstmann, 2018; Santa Maria et al., 2020) and emotional exhaustion as the core construct of burnout (Kaluza, Schuh, et al., 2020). Moreover, various cross-sectional studies have confirmed positive relationships between StaffCare and commitment (Horstmann & Remdisch, 2016), work engagement (Kaluza, Schuh, et al., 2020), and performance (Klebe, Felfe, & Klug, 2021a).

Indirect Relationship of StaffCare With Follower Outcomes Through Followers' SelfCare. In this area, the research findings have been mixed. One longitudinal study that separated the measurement of the outcome from the predictor and mediator supported an indirect relationship for general health, irritation, health complaints, and work-family conflict as outcomes (Franke et al., 2014). In contrast, while Klebe, Klug, and Felfe (2021) found evidence that supported an indirect relationship of StaffCare with emotional exhaustion through SelfCare of followers, all measured at the same time point, the authors found no supporting evidence when emotional exhaustion was measured with a time lag of one week. Similarly, Kaluza et al. (2021) could not confirm an indirect relationship for emotional exhaustion and work engagement as outcomes. At the same time, these researchers employed LMX as a parallel mediator to followers' SelfCare. Also, cross-sectional studies' exploration of the mediating role of followers' SelfCare between StaffCare and follower outcomes has been inconclusive. While some studies have supported such a role for burnout (Horstmann, 2018), well-being (Santa Maria et al., 2019), and emotional exhaustion (Kaluza et al., 2021) as outcomes, they found no corresponding support for health complaints (Santa Maria et al., 2019) or work engagement (Kaluza et al., 2021).

Relationship Between a Leader's SelfCare and Demonstrated StaffCare. To the best of my knowledge, only one correlational study has examined the hypothesized relationship between leaders' SelfCare and the StaffCare they show (Pundt & Felfe, 2017). Since this

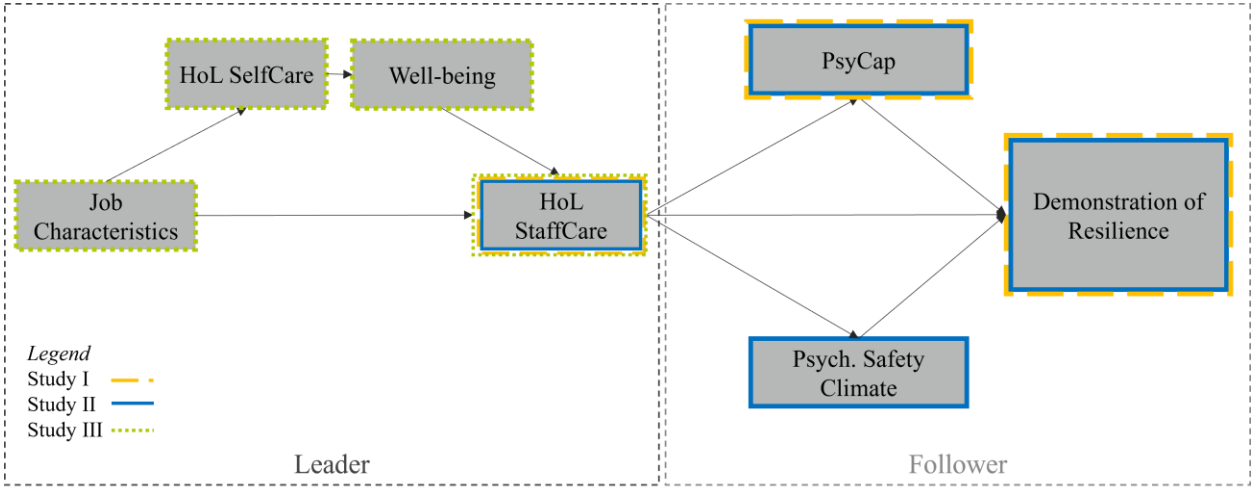
relationship forms one of the assumptions within the HoL model, Study III tested this concept more thoroughly with a shortitudinal study design.

Moreover, as this overview shows, cross-sectional studies are prevalent (cf. Rudolph, Murphy, & Zacher, 2020). The prior research has tested complex moderation and mediation models while employing mostly single time point designs (e.g., Horstmann & Remdisch, 2016; Santa Maria et al., 2020). This past approach raises serious concerns about the validity of the results and, in part, may explain the mixed findings presented earlier. Therefore, this thesis features longitudinal designs with multiple time points and varying time lags. In Study I, novice teachers provided their data at three time points with time lags of 10 weeks. In Study II, we employed a sample of teachers at three time points over 1.5 years. Lastly, in Study III, school principals took part in a weekly survey over the course of 5 weeks.

Research Model

As the overview of the empirical evidence related to the HoL concept has shown, previous studies have primarily focused on the relationship between the leader's StaffCare and the health or well-being of the employee. Studying the mechanisms linking StaffCare to health and well-being is therefore crucial to gain a deeper understanding of this relationship. Moreover, since the literature is quite clear that HoL has a positive influence on employees, the question arises as to what situational and personal aspects act as the antecedents to StaffCare. Figure 2 illustrates the overall research model of this thesis, which the next chapters will explain step by step.

Figure 2 *Conceptual Model Linking the Three Studies*



Broadening the Scope of Outcomes for StaffCare as Predictor

Within the JD–R model, strain and motivation are most often measured in terms of emotional exhaustion and work engagement (Lesener et al., 2019). In comparison, COR theory has been explicitly applied to the study of burnout (Hobfoll & Freedy, 2018). This focus is also reflected in the outcomes that have been applied to the study of StaffCare as it relates to followers' health. Burnout or emotional exhaustion are often considered as outcomes of StaffCare (Horstmann, 2018; Kaluza et al., 2021; Klebe, Klug, & Felfe, 2021; Santa Maria et al., 2019, 2020). Moreover, numerous scholars have employed irritation as an alternative measure of cognitive and emotional strain in relationship to StaffCare (Franke et al., 2014; Klug et al., 2019; Krick et al., 2021). Apart from these measures of strain, motivational aspects such as commitment (Horstmann & Remdisch, 2016) or job satisfaction (Krick et al., 2021) have been considered as outcomes. Additionally, multiple studies on StaffCare have examined physical health in the form of a general state of health question (Franke et al., 2014; Horstmann & Remdisch, 2016) or somatic complaints (Klug et al., 2019; Köppe et al., 2018).

Within this thesis, I aim to broaden the scope of outcomes by (a) considering the development of health over time as an adaptation to the transition from university to work as a novice teacher at a school (Study I) and (b) measuring resilience as low irritation despite a high stressor load (Study II). These ideas are based on the stream of literature on resilience at the workplace. In their integrative model of employee resilience, Britt et al. (2016) distinguished between the capacity for resilience and the demonstration of resilience. The authors stated that rather stable aspects within the employee or in their working environment build the capacity for resilience, which is present independent of the actual experience of adversity (Britt et al., 2016). However, the demonstration of resilience can only be observed in response to a significant stressor or adversity the employee

experiences. Specifically, the authors defined the concept as referring to "the documentation that individuals who have encountered significant adversity have exhibited positive adaptation" (Britt et al., 2016, p. 380). Britt et al.'s model allows the integration of leadership as a unit resource that contributes in addition to other resources to the employees' capacity for resilience. This notion is in accordance with the application of COR theory to the study of resilience, following S. Chen et al.'s (2015) statement that resources at the group level together with individual resources are the "primary building blocks of resilience" (p. 97). Going even further, Hobfoll et al. (2015) described the properties of the (working) environment as the most important aspect of resilience. The authors proposed that an environment that provides, among other elements, social and personal resources should protect individuals from resource loss and thereby contribute to their resilience. Thus, according to the integrative model of employee resilience and COR theory, leadership should contribute to employees' demonstration of resilience. Thus, I have applied two different operationalizations of demonstration of resilience as sustained health over time and health relative to stressor load to answer the call by Britt et al. (2016) to find new possibilities to measure resilience and combine the effort with the concept of HoL.

Thus, the application of COR theory to resilience (S. Chen et al., 2015; Hobfoll et al., 2015) and the integrative model of resilience (Britt et al., 2016) are complementary; together, they allow the assumption that StaffCare as one specific form of leadership should exert a positive influence on the operationalizations of resilience chosen for this thesis. StaffCare as proposed within the HoL model is particularly suited to the study of the relationship between leadership and demonstration of resilience for several reasons. In the first place, leaders' choice to attach a high value to the topic of health conveys the notion that physical and mental health are vital to the organization. This emphasis allows followers to protect their own health, making it a priority, possibly even a higher priority than performance (cf. Franke et al., 2014). Next, leaders who practice health awareness help followers realize when they are

stressed and why, which helps them become increasingly conscious about the relationship between specific stressors and the strain they experience. Such a gain in understanding facilitates active choices that support healthy behavior and make it more likely to sustain physical or mental health in the face of significant stressors. Finally, HoL behavior, as Franke et al. (2014) described it, includes but is not limited to "talking directly to followers when they seem to be stressed and finding solutions together, prioritizing tasks, as well as motivating followers to participate in worksite health promotion… activities…, and encouraging and motivating them to embrace a healthy lifestyle" (pp.140-141). In this way, leaders can explicitly target the topic of how to cope with high job demands, which research has shown to directly influence followers' chances to show resilience in the face of adversity.

Overall, based on the two most prevalent stress theories (COR and JD–R), the integrative model of employee resilience, and the assertions directly derived from the HoL concept, I posit that StaffCare should exert an influence on the demonstration of resilience. In addition to this enlargement of the scope of outcomes of StaffCare, the discussion will now turn to explore two different mechanisms between StaffCare and follower outcomes.

Mechanisms in the Relationship Between StaffCare and Follower Outcomes

Although numerous studies have demonstrated the positive effects that healthy leadership has on employees' well-being, the understanding of how this process unfolds remains unclear. Thus, investigating the mechanisms at play in this relationship is of considerable theoretical and practical interest. In general, the study of mechanisms can help build stronger theories in a specific field of research (Colquitt & Zapata-Phelan, 2007). Following the basic assumption within leadership theory that leaders exert an influence on the job characteristics of employees and shape the resources at employees' disposal (cf. Vincent, 2011), from a theoretical point of view,

examining resources other than job resources in the narrow sense is necessary. Such an examination promises to deepen the theoretical understanding of the leadership process. From a practical point of view, having knowledge concerning the mechanisms can facilitate developing tailored interventions at multiple levels within the organization. Therefore, in the studies included in this thesis, one internal resource (psychological capital) and one external resource (psychosocial health climate) were chosen as mediators.

As Wegge et al. (2014) have observed, leadership research has conflated "leader behavior (what leaders do) with leadership (the process of influencing followers)" (p. 18). Disentangling these two aspects from each other requires studying the mechanisms that underlie leader behavior (and cognitions) and employee outcomes. Wegge et al. (2014) described five pathways in the relationship between leadership and employee well-being. *Person-focused action* refers to the direct effect of leaders' actions on employees. *System-focused actions* are targeted at the team or organizational level and include aspects of work design. The *moderating action pathway* denotes actions that mitigate the effect of stressors. The pathway of *climate control and identity management* aims at cultivating shared perceptions and actions concerning the topic of health and creating a shared identity. The last pathway of *modeling* comprises the bi-directional influence between leaders and employees. Meanwhile, Inceoglu et al. (2018) offered another systematization of potential mediating variables that distinguished between motivational, social-cognitive, affective, relational, and identification-related mediators.

The person-focused pathway in Wegge et al.'s (2014) theorizing encompasses only leadership behaviors with "direct impact on the immediate health of employees" (p.12). However, based on COR theory (Hobfoll, 1989; Hobfoll et al., 2018), I argue that on the individual level, leadership cognitions and behaviors also have the potential to exert influence on the individual resources of employees, thereby indirectly

affecting their well-being. This notion is based on the first corollary within COR theory, in which the authors suggested that "individuals with more resources are better positioned for resource gains" (Halbesleben et al., 2014, p. 1337), along with Corollary 3 on gain spirals within COR theory, which presents the assumption that individuals who gain resources will have a higher chance of gaining additional resources (Halbesleben et al., 2014). Consequently, followers whose leader practices more StaffCare should be in a better position to gain further resources. Thus, I concur with Inceoglu et al. (2018) in stating that COR theory undergirds the conclusion that leaders help employees acquire resources. As follows from these theoretical ideas, I assume that, employees, in general, as well as (novice) teachers, in particular, who perceive their leader or school principal as health-oriented should be better equipped to gain further resources (Hobfoll et al., 2015).

In studying the mediators in the relationship between StaffCare and employee outcomes, I have chosen to focus on the followers' perception of StaffCare (Kuoppala et al., 2008; Perko et al., 2016). This choice reflects the reality that a leader's actions toward different followers are likely to vary according to the relationship between the leader and a particular follower (de Cremer, 2003). Thus, the relevant factor for the individual follower is the leadership they receive and not necessarily the leadership that the whole team perceives. This idea is further reflected in one study's finding that the StaffCare reported by employees exhibited a stronger relationship with their anxiety and depression than StaffCare reported by the leaders (Vonderlin et al., 2020).

Abundant literature supports the notion that various aspects of the working environment as well as individual aspects are mediators between leadership and followers' health. The JD–R model theorizes employees' work characteristics as mediators in the relationship between leaders' behaviors and employees' well-being. Along these lines, Vincent-Höper and Stein (2019) provided an overview of studies

on work characteristics as mediators. Similarly, a review by K. A. Arnold (2017) revealed that researchers have examined many mediators for the relationship between transformational leadership and employee well-being, including meaningful work, quality of working life, (occupational) self-efficacy, team efficacy, trust in the leader, employee motivation, work-life conflict, sense of community, opportunities for development, role clarity, influence, involvement, work-related rumination, social support, climate for innovation, need satisfaction, psychological empowerment, procedural justice, and psychosocial resources.

In the context of healthy leadership, in particular, the empirical evidence is not as extensive as for transformational leadership. As mentioned earlier, several studies have evaluated the hypothesized mediating role of followers' SelfCare in the relationship of StaffCare with different employee outcomes (Franke et al., 2014; Horstmann, 2018; Santa Maria et al., 2019). That said, scholars have also proposed other mediators in the relationship between StaffCare and follower outcomes. For example, Horstmann and Remdisch's (2016) cross-sectional study demonstrated that the relationship of StaffCare with health complaints and commitment was partially mediated via social demands and social resources. Kaluza et al. (2021), who simultaneously tested followers' SelfCare and LMX as mediators, reported data that confirmed the mediating role of LMX in the relationship between StaffCare and emotional exhaustion as well as work engagement. In a similar vein, this thesis proposes that PsyCap and psychosocial safety climate are mediators in the relationship between StaffCare and employee outcomes; the next sections present my explanation as to why I consider these factors to be relevant mechanisms.

PsyCap as Mediator Between StaffCare and Resilience. Luthans, Youssef, and Avolio (2007) introduced and empirically studied the concept of PsyCap, which the researchers defined as "an individual's positive psychological state of development" (p. 3), consisting of the aspects of self-efficacy, optimism, hope, and resiliency. Within the

literature on PsyCap, self-efficacy is understood as the confidence of an individual to successfully accomplish their tasks, which is based on Bandura's (1982) definition of self-efficacy (Luthans & Youssef-Morgan, 2017). Optimism is understood as an attributional tendency (Forgeard & Seligman, 2012; Seligman, 2006). A person with high PsyCap optimism "attributes positive events to personal, permanent and pervasive causes, and interprets negative events in terms of external, temporary, and situation-specific causes" (Luthans & Youssef-Morgan, 2017, p. 342). Based on the work of Snyder (2002), hope can be defined as the will to achieve (self-set) goals along with the knowledge of the appropriate pathways to reach these goals. Furthermore, PsyCap resiliency has been defined as "the capacity to rebound or bounce back from adversity, conflict, failure or even positive events, progress and increased responsibility" (Luthans, 2002, p. 702), based on the work of Masten (2001).

In terms of other scholars' organizational schemes, although PsyCap would be difficult to fit in one of Wegge et al.'s (2014) categories, this concept does find a place in the grouping of mediators by Inceoglu et al. (2018), where it can be categorized as a social-cognitive resource. Specifically, Inceoglu et al. (2018) described leaders' function in the following terms: "Leaders play an important role in framing the experience, being part of and shaping the social environment of their employees" (p. 182). Moreover, according to COR theory, PsyCap is a personal characteristic that helps people maintain their health and well-being when confronted with events that threaten or reduce their resources (Hobfoll, 1989). S. Chen et al. (2015) also discussed COR theory and its relevance to resilience, saying, "Resilience [is] fostered by circumstances where people are able to apply, grow and sustain their personal, social and material resources" (p. 96). The different aspects of StaffCare should help employees apply and grow their personal resources as summarized within PsyCap, which, in turn, should help them demonstrate resilience in the face of adversity.

Luthans, Youssef, and Avolio (2007) listed various sources that support the self-efficacy (as defined within PsyCap), including mastery, model learning, and positive feedback, all of which can be shaped by the leader. As a practical example, leaders can help foster employees' self-efficacy by assigning difficult but reachable goals (Inceoglu et al., 2018). Since leaders high in StaffCare are more aware of the work situations that their employees may experience as stressful and will also anticipate which working tasks will cause their employees to struggle (Franke et al., 2014), one of their responsibilities is to enhance the mastery experience of their followers by assigning appropriate tasks and goals.

Hope (as defined within the PsyCap literature) can be nurtured by setting appropriate goals that are measurable, specific, and challenging but achievable (Luthans, Youssef, & Avolio, 2007). Moreover, breaking down large goals into small steps encourages the development of realistic pathways to reach the goals (Luthans, Youssef, & Avolio, 2007). Prioritizing goals and offering the necessary resources to reach them are possible ways for leaders to enhance hope in their employees (Luthans, Youssef, & Avolio, 2007). StaffCare entails the notion that leaders care for the health of their employees and are willing to employ all available resources to support their followers in reaching the latter's goals. Moreover, talking with followers about how to prioritize tasks and ways to reach work goals also serves to enhance hope in employees (Franke et al., 2014).

According to Luthans, Youssef, and Avolio (2007), optimism can be developed in three ways: by reframing the past from a lenient point of view, appreciating the present, and seeking opportunities for the future. By implementing this approach, leaders can help their followers cultivate realistic optimism and develop a favorable attributional pattern. When leaders reflect together with the employee regarding how to cope with stressors at the workplace (Franke et al., 2011; Franke et al., 2014), they create moments to think about past successful approaches and plan the future while keeping their health in mind.

Among other qualities, resiliency can be developed by enhancing the level of resources available to employees (e.g., knowledge, experience, relationships) or by coaching when new challenges arise (such as a promotion; Luthans, Youssef, & Avolio, 2007). Thus, leaders high in StaffCare can nurture the resiliency of their followers in attaching a high value to the topic of health and thus showing their willingness to provide—and actually providing—adequate working conditions along with the necessary resources to help employees cope with their stressors (Franke et al., 2014).

Research has shown PsyCap to mediate the relation of leadership behavior with different outcomes (Newman et al., 2014). That said, many studies have focused on performance as an outcome (e.g., Bouckenooghe et al., 2015; Schuckert et al., 2018). Other studies on work engagement as an outcome have revealed that job resources, in general (Mazzetti et al., 2016), empowering leadership (Gyu Park et al., 2017), servant leadership (Karatepe & Talebzadeh, 2016), and authentic leadership positively influence PsyCap, which enhances work engagement in turn. Moreover, two studies reported that the relationship between authentic as well as servant leadership and intention to quit is mediated through PsyCap (Bouzari & Karatepe, 2017; Olaniyan & Hystad, 2016). In terms of health, a study by Lin (2013) investigated PsyCap as a mediator for the relationship between organizational support and mental health (specifically, burnout). In a similar vein, Djourova et al. (2020) successfully demonstrated that self-efficacy and resilience serially mediated the relationship of two aspects of transformational leadership (inspirational motivation and individualized consideration) with two measures for strain (psychosomatic complaints and psychological distress). Nevertheless, the researchers were unable to show this serial mediation for the two other aspects of transformational leadership (idealized influence and intellectual stimulation). To the best of my knowledge, the Study I included in this thesis (M. Arnold & Rigotti, 2021) is the first one to link

healthy leadership with PsyCap or study PsyCap as a mediator between healthy leadership and resilient outcomes.

Climate as a Mediator Between StaffCare and Resilience. In general, climate can be defined as "the meanings people attach to interrelated bundles of experiences they have at work" (Schneider et al., 2013, p. 361). As concerning the topic of leadership, scholars have proposed multiple domain-specific forms of climate (Dollard et al., 2019), such as innovation climate (Baer & Frese, 2003) or safety climate (Zohar, 1980). In this thesis, I focus on a particular form of climate that is specific to the topic of mental health: psychosocial safety climate, which has been defined as the "policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard & Bakker, 2010, p. 579).

According to the categorization of mediators proposed by Inceoglu et al. (2018), psychosocial safety climate is a relational mediator; however, it also fits within the category of social-cognitive mediators. These two categories have in common the assumption that leaders shape the perception of followers (Bandura, 1982; Blau, 1964). As Blau (1964) argued in his influential work on social exchange theory, a leader can and should "advance the *collective* interest of subordinates" (p. 207) and thus create the perception among followers that the former attaches high importance to the welfare of all employees. According to theory, this emphasis on collective interest, in turn, creates social obligations for the followers (Blau, 1964). Therefore, a leader who shows high StaffCare creates a climate where the mental health of employees is valued; moreover, followers will also contribute to this climate by speaking up when noticing problems. As a result, the leader and followers together create a climate of psychosocial safety.

Based on Wegge et al.'s (2014) categorization, psychosocial safety climate fits the pathway of climate control and identity management. The idea is that leaders cultivate a shared perception of health-related actions within teams or schools (Wegge et al., 2014). Thus, I assume that

school principals' StaffCare is one aspect of leadership cognitions and behaviors that should exert a direct influence on the teachers' perceptions of climate. Leaders who are high in StaffCare attach a high value to and show concern for their employees' health, thereby communicating their support and commitment to psychosocial safety in the organization (Dollard et al., 2012). Moreover, leaders high in StaffCare must be willing to take actions to enhance staff members' participation, which constitutes another aspect of the organization's psychosocial safety climate (Dollard et al., 2012).

Earlier studies have considered the relationship between health climate and healthy leadership in different positions of their theoretical or empirical models. Basen-Enquist et al. (1998) developed a measure of health and safety climate, arguing that leadership would be a predictor of that climate; however, the authors did not test this notion empirically. Franke et al. (2014) discovered a positive correlation between general working climate (measured with two items) and StaffCare. Gurt and Elke (2009) found mixed evidence for antecedents of organizational health culture; specifically, their cross-lagged panel demonstrated that healthy leadership behavior at t1 was negatively related to health culture at t2. Nonetheless, the researchers also reported that the concurrent effect of engagement in health promotion at t2 on health culture at t2 was positive (Gurt & Elke, 2009). When further investigating their concept of health climate with respect to healthy leadership, they found a serial mediation from healthy leadership to irritation via health climate and role ambiguity (Gurt et al., 2011). Meanwhile, a recent study by Kaluza, Schuh, et al. (2020) tested and confirmed organizational climate as an antecedent of leaders' health mindset and healthy leadership. In this case, the climate variable was assessed by surveying the leaders; thus, the study findings represent the climate within the organization as the leaders themselves perceived it. In contrast, in this thesis, my aim was to study the climate that the teachers within a school perceive. Thus, from this perspective, it is more plausible to test leadership as an antecedent of climate.

Nonetheless, considering what antecedents help or hinder leaders to show StaffCare comprises an interesting research question. Accordingly, the next part of the discussion develops the corresponding part of the research model (Figure 2).

Predictors of HoL

A reductionist perspective on leadership considers organizational processes in isolation and formulates one-directional relationships between them (Vullinghs & Dóci, 2020). Specifically, the authors summarized this reductionist perspective in stating that "mainstream schools of leadership research […] build on the premises that leadership (and a particular leadership style) is a quality that some people possess while others don't" (Vullinghs & Dóci, 2020, p. 255). Within this perspective, the leaders' behavior is most often the predicting variable, while followers' behavior is defined as the outcome. In a seminal article, Barling and Cloutier (2017) warned that knowledge about leaders' health was missing from the body of knowledge on leadership. In a similar vein, Nielsen and Taris (2019) pointed out that the topic of variability of leadership had been largely ignored in earlier research, thus neglecting the complexity of leadership by oversimplifying and reducing it to cross-sectional relationships with outcomes. However, prior studies on the topic confirmed the timely variability of leadership behavior (e.g., Hoption, 2016).

Therefore, with this thesis, I aim to include the leaders themselves in examining situational antecedents of HoL, which will inevitably lead me to surpass the limitations of the reductionist perspective. Because leaders are known to face high stressors in their working environment (Day et al., 2004; Hunter et al., 2011), understanding the relationship between leaders' stress and strain with the leadership they show toward their followers is vital. Moreover, I add to this perspective by also integrating leaders' job resources and motivation as positive aspects that should contribute to a leader's ability to show StaffCare.

Kaluza, Boer, et al. (2020) provided an overview of the different theories scholars have used to argue in support of a relationship between leadership and the leaders' well-being. Intriguingly, research has explored both causal directions: leadership influencing leaders' well-being and leaders' well-being influencing leadership. However, according to the theoretical basis of the JD–R model, job demands and resources that leaders experience can be presumed to exert an influence on the leadership they show toward their employees. Leadership can be seen as one form of performance, constituting a distal outcome within the JD–R model (Mumford, 2011). Thus, the health-impairment process and the motivational process should reduce and foster positive leadership, respectively. This theoretical line of reasoning allows the conclusion that the job characteristics of leaders are critical antecedents to leaders' well-being, but also their leadership behavior.

Empirical research has found support for the idea that the job characteristics and well-being of leaders are related to their leadership (behavior). Although some researchers have examined the specific job demands and resources that leaders experience (e.g., Corin & Björk, 2016; Hambrick et al., 2005; Knudsen et al., 2009; Zimber et al., 2015), empirical evidence regarding job characteristics as antecedents of leadership is scarce. Specific topics, such as relationships between excessive job goals and leaders' workplace aggression (Sharma, 2018) and between time pressure and transformational leadership (Dóci et al., 2020), have been empirically supported. Furthermore, in a qualitative study, Horstmann and Remdisch (2019) showed that leaders' job resources were perceived as crucial antecedents for the HoL subscales.

The relationship between well-being and leadership found support in a meta-analysis by Harms, Credé, et al. (2017), who successfully demonstrated that the three facets of burnout (depersonalization, emotional exhaustion, and low personal accomplishment) were negatively related to transformational leadership. Meanwhile, Barling and Cloutier (2017) presented an overview that further supported the

idea of strain as an antecedent for leadership by showing that depressive symptoms and anxiety were related negatively to transformational leadership and positively to abusive supervision. In terms of HoL, Köppe et al. (2018) revealed that leaders' exhaustion was significantly and negatively related to employee-rated StaffCare behavior. On a related note, Kaluza, Schuh, et al. (2020) confirmed organizational health climate as a predictor for StaffCare. Moreover, Klebe, Felfe, and Klug (2021b) showed that leader strain negatively related to StaffCare in a field and vignette study.

In line with this discussion, Study III presents a serial mediation model of antecedents of StaffCare. According to the basic tenets of the JD–R model, job characteristics should exert an influence on leaders' SelfCare, which should relate positively to work engagement and negatively to emotional exhaustion. Ultimately, SelfCare, work engagement, and emotional exhaustion should relate to StaffCare as one form of leaders' performance. Figure 2 illustrates this causal chain.

The next three chapters present the studies conducted to answer the research questions. An overview of each study's aim, methodology, and key results is provided in Table 1.

Table 1 Overview of the Three Studies Included in the Thesis

Study I: The Role of HoL for Newcomers' Resilience	Study II: HoL for Resilience in Times of Crisis	Study III: Antecedents of HoL
Aim The aim of this study was to explore the development of physical and mental health of novice teachers within the first 5 months of their teaching experience. Based on adaptation theory and the integrative resilience model, HoL and PsyCap were considered as predictors of health development. Moreover, a mediation of HoL via PsyCap on development of health was hypothesized.	**Aim** PsyCap was supported as a mediator between HoL and the demonstration of resilience in Study I. Therefore, in Study II, the aim was to replicate these findings for another form of resilience within the setting of the COVID-19 pandemic. Moreover, psychosocial safety climate as a resource in the working environment was considered as an additional mediator.	**Aim** This study explored factors enabling a leader to show StaffCare. The study integrated the HoL model (with SelfCare and StaffCare) into the JD–R model specific to the role of a leader in proposing a serial mediation model that included SelfCare as a mediator and StaffCare as an outcome within the motivational and the health-impairment paths of the JD–R model.
Method Participants: 776 novice teachers Procedure: Longitudinal study design with 3 points of measurement and a time lag of 10 weeks in January–July 2018 Measures: StaffCare (HoL), psychological capital (PCQ), physical and mental health (SF-12) Data analysis: Latent class growth analysis, automated and manual 3-step approach to include predictor variables	**Method** Participants: $N_{t1} = 1{,}359$; $N_{t2} = 1{,}117$; $N_{t3} = 169$ teachers; final sample $N = 107$ Procedure: Longitudinal study design with 3 time points: t1 in September/October 2018, t2 in December 2018/January 2019, t3 in April/June 2020 Measures: StaffCare value and awareness (HoL), psychosocial safety climate (PSC-4), psychological capital (PCQ), job demands (FASS, ISTA, NRSS), irritation (Mohr), span of control Data analysis: Demonstration of resilience as residuals of regression between job demands and irritation, structural equation modeling of mediation while accounting for the nested structure of the data	**Method** Participants: 234 school principals with data from 956 weeks overall Procedure: Shortitudinal study design with 5 weekly questionnaires in January and February 2019 Measures: Job resources (FASS, EviS, Warwas), job demands (NRSS, Warwas), work engagement (UWES), emotional exhaustion (MBI), StaffCare and SelfCare (HoL) Data analysis: Multilevel structural equation modeling; results were interpreted at the within-level of analysis
Main results Three latent classes of physical (resilient, decreasing, increasing) and four latent classes of mental (resilient, decreasing, increasing, low-chronic) health were differentiated. HoL as a single predictor significantly contributed to 3 of the 5 group comparisons of health trajectories. PsyCap predicted 4 of the 5 group comparisons. The same pattern of 4 significantly predicted group comparisons emerged for the indirect effects of HoL via PsyCap on latent class membership.	**Main results** No direct relationship between HoL and the demonstration of resilience was found. However, the data supported indirect positive effects via psychosocial safety climate and PsyCap as parallel mediators.	**Main results** SelfCare mediated both the relationship between job resources and work engagement and between job demands and emotional exhaustion. Moreover, StaffCare was supported as an outcome of the motivational path but not of the health-impairment path. Accordingly, the serial mediation was supported for job resources with StaffCare via SelfCare and work engagement but not for job demands with StaffCare via SelfCare and emotional exhaustion.

The Role of Health-oriented Leadership for Newcomers' Resilience

Abstract

During the transition from university to work, young adults face a stressful period in which leadership behavior serves as a guideline. Positive leadership behavior has the potential to increase internal resources, such as positive psychological capital (PsyCap). The research question addressed in this paper is if health-oriented leadership (StaffCare) and PsyCap as resources jointly influence the physical and mental health of novice teachers during the transition to work. In a longitudinal study, 776 novice teachers responded to three questionnaires with a time lag of 10 weeks during the first 5 months of their occupational experience. Results of a latent class growth analysis show that three trajectories of physical health and four trajectories of mental health can be distinguished. StaffCare and PsyCap predict class membership separately, and the relationship between StaffCare and class membership is mediated by PsyCap. This implies that training supervisors in StaffCare can help novice teachers cope with stressors during their teacher training. Applying latent class growth models in this line of research is novel and adds to the understanding of internal and external resources in the process of adaptation to major life events, such as the transition from university to work.

K*eywords:* health-oriented leadership, adaptation, organizational socialization, psychological capital, resilience[1]

[1] In the published study, we used the label HoL as a synonym for StaffCare. To create higher consistency throughout this thesis, I applied the label StaffCare when adequate.

Introduction

The transition from education at university to working in an organization can be a stressful life event. According to adaptation theory, major life events lead to changes in well-being and health (Luhmann et al., 2012). As Ellis et al. (2015) noted, our knowledge of the short- and long-term outcomes of the stress experienced by newcomers during the socialization process is still limited. Applying within-persons designs (i.e., studying the development of outcomes such as health or performance within persons over time) to understand the role of resources during the process of socialization and how these help to shape health outcomes of newcomers is recommended (Ellis et al., 2015). Therefore, in the present study we track the development of physical and mental health of newcomers during the first 5 months after organizational entry by means of the statistical method of latent class growth analysis (LCGA) to identify different trajectories of health in reaction to this transition, as the development of health unfolds over time and therefore is inherently dynamic (Palmer, 2016).

Recently, research on adaptation theory is shifting from studying temporary effects of major life events on well-being to factors influencing the trajectory of adaptation (Uglanova & Staudinger, 2013). The development of health and well-being depends on contextual and personal resources available to individuals (Uglanova & Staudinger, 2013). This notion is based on the conservation of resources (COR) theory, which suggests that resources travel in caravans (S. Chen et al., 2015). Such resource caravans occur when the availability of resources enables individuals to attain other new resources.

Various reviews and meta-analyses have shown that leadership plays a crucial role in keeping employees healthy despite high demands at work (Kuoppala et al., 2008; Montano et al., 2017; Skakon et al., 2010). Several studies suggested that the link between constructive leadership with health and well-being is mediated by building up personal resources (e.g., Nielsen et al., 2009; Nielsen & Munir, 2009). In

the present study, we introduce PsyCap, a malleable and therefore trainable motivational tendency (Luthans, Youssef, & Avolio, 2007) as a mediator. PsyCap is a well-validated construct consisting of four resources (self-efficacy, hope, resilience, and optimism). Referring to adaptation theory as well as COR theory, we suggest that the concept StaffCare within the model of health-oriented leadership (HoL) and PsyCap are both relevant predictors for the development of health.

By taking a person-centered approach to model trajectories of health, we aim to contribute to socialization literature, as well as leadership literature, following an occupational health psychological perspective in three ways. First, socialization literature has mainly focused on behavioral and organizational outcomes and widely ignored well-being and health as relevant outcomes (Ellis et al., 2015). However, the health of newcomers is an important variable since reduced health produces costs, for example, in the form of productivity loss or turnover of newcomers (Ellis et al., 2015). Therefore, it is an important goal to keep newcomers healthy during their transition. The positive role that supervisor support plays during this transition has been shown (Gruman & Saks, 2013; Jokisaari, 2013; Sluss & Thompson, 2012). We argue it is worthwhile to employ a leadership concept tailored to health promotion for studying health as an outcome during the adaptation process after career entry. It has been shown that StaffCare predicts health outcomes beyond transformational leadership (Franke et al., 2014). With the present study, we enlarge knowledge on the development of health during organizational socialization and suggest that StaffCare plays a key role in this process.

Second, the mechanisms that allow StaffCare to influence health are not yet clear. In their conceptual model, Klug and Felfe (2019) integrated personal attributes as mediators between StaffCare and outcomes. Mechanisms studied so far are the self-care of employees (Franke et al., 2014; Horstmann, 2018) and working conditions (Horstmann & Remdisch, 2016; Jiménez, Bregenzer, et al., 2017). With

this paper, we enlarge knowledge on possible mechanisms by introducing PsyCap as a mediator that incorporates four malleable personal resources.

Third, we apply a person-centered approach and study the development of health over time. According to Roe (2008), a deeper knowledge of behavioral dynamics allows us to monitor the developmental trajectories, warn if critical changes occur, introduce corrections if trajectories diverge from an optimum, prevent unfavorable developments and their negative outcomes, and optimize trajectories by changing the conditions. This knowledge can only be gained by studying trajectories, and, at the moment, these "temporal processes are a bit of a black box in I-O [industrial-organizational] research" (Britt et al., 2016, p. 394). By applying a person-centered approach in the present study, we generate knowledge on the development of mental and physical health after career entry. This allows us to understand which resources not only help to enhance health at one point in time but also sustain health during a stressful period following a major life event.

Adaptation Theory and Development of Health Among Newcomers

The main proposition of adaptation theory is that major life events lead to changes in well-being (Luhmann et al., 2012). People adapt to positive or negative events over time and return to a baseline of well-being (Brickman & Campbell, 1971). This process of hedonic adaptation (Lyubomirsky, 2011) leads to a set-point differing between individuals and being above the neutral point (Diener & Diener, 1996). Adaptation is essential for functioning since only the habituation to chronic stimuli allows us to focus on changes and guide our attention to new information (Luhmann et al., 2012). Adaptation protects people from the possible consequences of prolonged emotional states on physical and mental health (Lucas, 2007).

Two major perspectives guide the thoughts on life events: a developmental perspective and a stress perspective (Luhmann et al.,

2012). From a developmental perspective, life events posit specific transitions. One can define transitions as discontinuities in people's lives that require a new behavioral response (Hopson & Adams, 1976). Within the stress perspective, life events posit one specific type of stressor that significantly disturbs the daily routine (Turner & Wheaton, 1997). It is important to delineate minor stressors, such as daily hassles, that are distinct from life events (Luhmann et al., 2012).

Career entry is a transition in life that fits both definitions. Newcomers entering an organization need to adjust to their new work environment (T. N. Bauer et al., 2007), which is assumed to be stressful (Ellis et al., 2015). This process is known as organizational socialization, which "refers to the process by which newcomers make the transition from being organizational outsiders to being insiders" (T. N. Bauer et al., 2007, p. 707). As T. N. Bauer and Erdogan (2014) showed in their literature review, socialization is more important in the case of recent college graduates entering a job than for workers who change between jobs and have previous work experience.

Organizational socialization scholars have mainly focused on attitudinal and behavioral outcomes, including commitment, job satisfaction, turnover, or performance (T. N. Bauer & Erdogan, 2014). Ellis et al. (2015) included health and well-being as distal outcomes of socialization into their model and call for studies on health during socialization. Several authors answered this call by including burnout (Alessandri et al., 2018; Frögéli, Rudman, Lövgren, & Gustavsson, 2019), emotional exhaustion (Lapointe & Vandenberghe, 2018), or the prevalence of mental health problems (Levecque et al., 2017) in empirical and theoretical models. However, how physical and mental health develop after entering the workforce remains unclear. Positive adaptation to this transition becomes visible in sustained health despite the high and manifold demands experienced by newcomers. We aim to add to this literature by investigating the development of physical as well as mental health during career entry in the present study.

Within the process perspective of adaptation theory, researchers aim to predict trajectories of well-being by focusing on changes within individuals initiated by external stimuli and causing a physical or mental response (Luhmann et al., 2012). Diener et al. (2006) argued that if adaptation was an automatic process after life events, then the trajectory of adaptation would be the same for all individuals. However, empirical evidence suggests there are large individual differences in the extent, direction, and rate of adaptation after the same sort of life event (Diener et al., 2006); therefore, differences in individual changes are of interest (Kammeyer-Mueller et al., 2013). Concerning negative life events, this trajectory depicts a process of recovery in which the life event triggers a psychopathology or sickness that leads back to normal functioning (Bonanno, 2004; Galatzer-Levy et al., 2018). Thus, when studying adaptation during organizational socialization, it is important to measure changes over time in health (G. Chen et al., 2011).

Only a few studies concerning adaptation during the transitioning from university to work or on organizational socialization have employed this approach. For instance, Frögéli, Rudman, and Gustavsson (2019) investigated the development of strain in nurses entering the workforce and found a slight overall decrease of strain during the first 3 months with significant individual differences in this rate of change. Valero and Hirschi (2019) showed that two distinct trajectories of job satisfaction in adolescent workforce newcomers exist, as one-third of their sample showed a high and stable job satisfaction, whereas two-thirds showed decreasing job satisfaction over the first 4 months after career entry.

This leads us to the proposition that different trajectories of physical and mental health exist in newcomers. We expect at least two different trajectories: a group with stable health implying successful adaptation to the new stressors and a second group with decreasing health because of rather unsuccessful adaptation.

Proposition: The (a) physical health and (b) mental health experienced by newcomers during their first 5 months can each be grouped into different trajectories.

Embedding Health-Oriented Leadership Within Adaptation Theory

The question that arises is the following: What are strategies and factors leading to positive and successful socialization and adaptation? Since most of the work experiences during socialization are new and contribute to the sense-making of the new environment, the role of interpersonal interactions is "likely to resonate especially strongly with newcomers" (Kammeyer-Mueller et al., 2013, p. 1106). Research shows that supervisory support decreases distress (C. D. Fisher, 1985; D. L. Nelson & Quick, 1991), enhances job satisfaction (C. D. Fisher, 1985; Jones et al., 2005), and influences affect (Nifadkar et al., 2012).

Various studies have shown the positive relationship of transformational, relations-oriented, supportive, and considerate leadership with health and well-being (for an overview see Montano et al., 2017; Skakon et al., 2010). However, these classical leadership concepts are not tailored to the question of how leaders influence health and well-being. Therefore, Franke et al. (2014) developed the concept of HoL, which incorporates three facets of leadership behavior and attitudes towards followers (StaffCare). These are health behavior, value of health, and health awareness (Franke et al., 2011). *Health behavior* refers to engagement and personal activity in health-enhancing actions. *Value of health* describes the importance that individuals ascribe to their health or the health of their followers. Aspects such as sensitivity, reflection, and attention paid to health are subsumed under *health awareness* (Franke et al., 2014). Within COR theory (Hobfoll, 1989, 2011), StaffCare can be categorized as an external resource that helps employees acquire new resources and maintain their health. It is part of the health-promoting behavior of the leader to notice when employees are stressed and to address this in direct communication (Klug et al., 2019). In this way, tasks can be prioritized

together and the employees can be motivated to make use of health promotion services and live in a healthy way (Franke et al., 2014). This form of behavior should reduce the tension in work situations and thereby unfold its health-promoting potential.

Evidence for this model is derived from studies investigating the relationship of StaffCare with mental health. When leaders show StaffCare, employees experience less strain (Franke & Felfe, 2011), fewer health complaints (Horstmann & Remdisch, 2016; Klug et al., 2019), less physical or mental health problems, and higher well-being (Santa Maria et al., 2019) and self-rated health (Klug et al., 2019). Moreover, Franke et al. (2014) showed that StaffCare has a strong relationship with employees' health measured with a time lag of 4 months. However, in this study, the effect of StaffCare on health 4 months later was tested in a hierarchical regression but without control for health at the first measurement point, with results indicating that StaffCare has incremental validity above and beyond transformational leadership (Franke et al., 2014). The design of the present study goes beyond this lagged design by predicting trajectories of health by StaffCare.

Hypothesis 1: StaffCare experienced by novice teachers predicts membership in the stable compared to the nonstable trajectories of (a) physical and (b) mental health.

The Role of Personal Resources in Adaptation Theory

Lyubomirsky (2011) model of adaptation theory suggests that individual aspects and strategies, such as gratitude or optimism, are able to prolong positive feelings after positive events and help attenuate negative feelings after negative events. In their model of socialization, Ellis et al. (2015) also proposed that personal resources, such as self-efficacy and locus of control, can be threatened by high perceived stress during socialization. During career entry, occupational self-efficacy is an important variable in predicting career satisfaction (Abele & Spurk, 2009), job satisfaction (Gruman et al., 2006; Pinquart et al., 2003),

proactive behavior (Gruman et al., 2006), engagement (Saks & Gruman, 2011), performance, intentions to remain, turnover (T. N. Bauer et al., 2007), and anxiety and stress (Saks, 1994). An internal locus of control in newcomers is associated with higher job satisfaction and lower work anxiety (Spector & O'Connell, 1994). This demonstrates that different personal resources can play a role in the socialization process.

To more comprehensively study the influence of personal resources in the process of adaptation and socialization of newcomers, the concept of PsyCap (Luthans, Youssef, & Avolio, 2007) is well suited (cf., T. N. Bauer & Erdogan, 2014; Klemme Larson & Bell, 2013). PsyCap is a metaconstruct that includes self-efficacy, optimism, hope, and resilience (Luthans, Youssef, & Avolio, 2007). S*elf-efficacy* (Bandura, 1977) describes the belief of individuals that they can act out a certain behavior to attain the desired outcome. *Optimism* is an attributional pattern where defeat is interpreted as temporary, limited to one case, and externally attributable, whereas positive events are interpreted as being permanent, pervasive and attributable to personal accomplishment (Seligman, 2006). *Hope* is defined as a positive motivational state derived from pursuing a certain goal, which includes agency and pathways (Snyder, 2002). *Resilience* is the "positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure, or even positive change, progress, and increased responsibility" (Luthans, 2002, p. 702). These four aspects of PsyCap can be grouped into one second-order factor theoretically (Luthans et al., 2008) and empirically (Luthans, Avolio, et al., 2007). The higher-order construct of PsyCap is defined as "a motivational propensity to accomplish tasks and goals" (Luthans, Avolio, et al., 2007, p. 548). The combination of these four aspects should be more impactful and broader than each construct individually (Luthans, Avolio, et al., 2007).

In their conceptual model, Youssef-Morgan and Luthans (2015) stated that well-being is driven by positive PsyCap. In a meta-analysis,

PsyCap shows a positive relationship to satisfaction, commitment, and mental well-being (Avey, Reichard, et al., 2011). In addition, PsyCap negatively influences mental health problems, substance abuse (Krasikova et al., 2015), anxiety, depression, negative affect (Roche et al., 2014), burnout (Estiri et al., 2016), and psychological distress (Mazzetti et al., 2016) and positively influences subjective well-being (Rabenu et al., 2017). We expand these findings in applying it to the outcomes of trajectories of physical and mental health.

Hypothesis 2: PsyCap predicts membership in the stable compared to the nonstable trajectories of (a) physical and (b) mental health.

Psychological Capital as a Mediator

According to COR theory, resources travel in caravans (Hobfoll, 1989, 2011). When experiencing a high level of resources, individuals are more capable of attaining other new resources. We propose that the external resource of StaffCare will influence PsyCap as an internal resource. On a continuum between the poles of state and trait, PsyCap is seen as a state-like trait (Harms, Vanhove, & Luthans, 2017; Luthans, Avolio, et al., 2007). Thus, aspects such as the leaders' behaviors influence the levels of PsyCap of employees (Luthans et al., 2008; Luthans & Youssef-Morgan, 2017). In their socialization resources theory, Gruman and Saks (2013) proposed that different socialization resources, such as training or anticipatory socialization, should lead to higher PsyCap of newcomers, which in turn should positively influence various outcomes, including well-being. They argued that the time as a newcomer can be a turbulent and difficult transition leading to doubt, confusion, anxiety, or disorientation (H. J. Klein & Heuser, 2008). In this situation, PsyCap is an important factor and well-being is an important outcome (Gruman & Saks, 2013). This is further supported by empirical evidence showing that empowering (Avey, 2014; Gyu Park et al., 2017), ethical (Avey, 2014), servant (Bouzari & Karatepe, 2017; Karatepe & Talebzadeh, 2016), and authentic (Gill & Caza, 2018) leadership are positively linked to the PsyCap of followers.

In their theoretical reasoning of the HoL approach, Franke et al. (2014) argued that StaffCare not only influences behavior but also cognitive and motivational aspects. Therefore, we argue that StaffCare influences PsyCap. For example, by assigning tasks with appropriate difficulty, health-oriented leaders create opportunities for performance accomplishment (Bandura, 1977) and enhance self-efficacy and goal-directed thinking (Snyder, 2002) in newcomers. Optimism is thwarted by negative and nurtured by positive experiences (Peterson, 2000). By encouraging followers to engage in recreational activities, health-oriented leaders enhance possibilities for positive experiences and thereby help to build or restore optimism and resilience. PsyCap, in turn, influences mental health, as described earlier. PsyCap has been shown to mediate the relation of leadership behavior with performance (e.g., Bouckenooghe et al., 2015; Schuckert et al., 2018), work engagement (Gyu Park et al., 2017; Karatepe & Talebzadeh, 2016), and intention to quit (Bouzari & Karatepe, 2017; Olaniyan & Hystad, 2016). Only one study investigated PsyCap as a mediator between leadership and health. Lin (2013) showed that the relationship between organizational support and burnout is mediated via PsyCap. Overall, we conclude with the following hypothesis:

Hypothesis 3: Psychological capital mediates the relationship between StaffCare and membership in the stable compared to the nonstable trajectories of (a) physical and (b) mental health.

Method

Setting

The sample consisted of university graduates entering their careers as teachers in Germany. In Germany, a systematic induction period exists to introduce novice teachers to their new tasks. The length of this period varies among the federal states between 1.5 and 2 years and consists of two parts. On the one hand, novice teachers teach at a school and fulfill the tasks of a teacher. All are federally employed and receive a salary, and most of the trainees are temporary civil servants. On the

other hand, they are expected to attend seminars organized by vocational teachers' training colleges (Klusmann et al., 2012). The work and progress of the novice teachers are monitored by supervisors at the training colleges. These supervisors provide feedback and evaluate the novice teachers' performance according to the prescribed competency goals. The novice teachers have at least weekly interactions with their supervisors.

Procedure and Sample

The principals of the vocational teachers' training colleges were contacted and asked to administer the questionnaires to novice teachers in their college at three time points. The first time point was during the first week of the induction period (N_{t1} = 2365), and the second (N_{t2} = 1830) and third surveys (N_{t3} = 1305) followed 10 and 20 weeks later, respectively. The final sample consisted of 776 novice teachers who participated in all three surveys. To achieve optimal estimates of growth parameters, only cases with full participation were included in the analysis.

The sample was female-dominated with 70.5% being women. This gender distribution can be seen to be representative for teachers in Germany, as the share of female teachers in 2018 was reported to be 73% across all types of schools (Statistisches Bundesamt, 2019). The mean age of respondents was 27.58 years (*SD* = 4.59) with a range from 22 to 57 years. An analysis of the participants who answered all three surveys and those who did not, showed no differences in gender (t (2347) = -0.31, p = .757) and mental health (t (2307) = 1.262, p = .207). However, participants differed in their age (t (2316) = -2,138, p = .033) and level of physical health (t (2307) = 3.384, p = .001), with those completing all surveys being on average 7 months younger and reporting better physical health than those with incomplete participation.

Measures

Health. The physical and mental health of novice teachers was measured using the 12-Item Short-Form Health Survey (SF-12; Ware et al., 1996). The SF-12 consists of 12 items and weighted use of the items results in two scores: a physical and a mental score of health. Examples of items are "How would you describe your state of health in general?" or "Did you manage less than you wanted in the past month because of your physical health?" Questions were answered either on a binary scale (*yes, no*) or on a Likert scale with five or six points. The German version of the SF-12 has been validated (M. A. Wirtz et al., 2018), and calculation of scores followed recommendations by Reusch et al. (2002). Overall, the SF-12 reliably and validly measures the subjective health of study participants (Ware et al., 1996). Higher scores indicate better health, and interpretation is in relation to a population mean of 50 (*SD* = 10). Theoretically, a range from 0 (worst health) to 100 (best health) is possible (M. A. Wirtz et al., 2018). Physical and mental health was measured at all time points.

Health-oriented leadership. The extent of StaffCare shown by the supervisor was measured with the instrument developed by Franke et al. (2014). The instrument is comprised of 22 items, building the four subscales of awareness (6 items), value (3 items), behavior (10 items), and lifestyle (3 items). Examples of items are "My supervisor in the training college notices when I reach my health limits" or "My supervisor in the training college makes sure that the topic of health is not neglected." Answers were given on a 5-point Likert scale with the endpoints 1 (*not at all true*) and 5 (*absolutely true*). Four items were excluded from further analysis since they decreased the internal validity and the model fit of confirmatory factor analyses. Confirmatory factor analyses revealed that a model with four facets had the best fit ($\chi^2(129) = 638.84$, *CFI* = .94, *TLI* = .93, *RMSEA* = .08) compared to a model with only one factor ($\chi^2(135) = 2274.6$, *CFI* = .75, *TLI* = .72, *RMSEA* = .15) as well as a model with a second-order factor comprising the other four

facets ($\chi^2(131) = 657.59$, *CFI* = .94, *TLI* = .93, *RMSEA* = .08). However, since we did not assume differential hypotheses for the facets of StaffCare and the values of *CFI, TLI*, and *RMSEA* did not differ between the four-facet model and the hierarchical model, we operationalized StaffCare as a model with a second-order factor in all further analyses. The internal consistency for the global assessment was .94. StaffCare was only measured at the second time point. Since the first assessment was during the first week of the induction period, it was impossible to measure the leadership behavior of the supervisor. If at all, our respondents only had sporadic meetings with their supervisor within these few days and therefore could not evaluate the leadership behavior in a valid way. During the first months of the induction period, novice teachers normally have weekly contact with their supervisor. The evaluation of StaffCare by the supervisor refers to the first 10 weeks of the induction period.

Psychological capital. To measure the three subscales of hope, optimism, and resilience of PsyCap, the PCQ (Luthans, Youssef, & Avolio, 2007) was used. Sample items are "I can think of many ways to reach my current work goals" (hope), "I always look on the bright side of things regarding my job" (optimism), and "I usually take stressful things at work in stride" (resilience). Since the items on self-efficacy of the PCQ were not adequate for the job of teachers, the three items with the highest loadings of the occupational self-efficacy scale by Rigotti et al. (2008) were used. Answers for all items were given on a 6-point Likert scale with the endpoints 1 (*is not true at all*) and 6 (*is absolutely true*). The internal validity of the scale was high (α = .92). The hierarchical structure of PsyCap was replicated with a confirmatory factor analysis comprising a second-order factor ($\chi^2(50) = 579.61$, *CFI* = .89, *TLI* = .85, *RMSEA = .12*). A confirmatory factor analysis with the four facets did not differ significantly from this solution ($\chi^2(48) = 573.77$, *CFI* = .89, *TLI* = .84, *RMSEA = .12*). Both models fitted significantly better than the model with only one factor ($\chi^2(54) = 652.03$, *CFI* = .87, *TLI* = .84, *RMSEA = .12*). Based on theoretical reasoning and previous research, we decided on

the hierarchical model of PsyCap (Luthans, Avolio, et al., 2007). The PsyCap measurement at the second time point referred to the momentary state of PsyCap and was used in the analyses to create a temporal fit with the measurement of StaffCare.

Control variables. Gender, age, and the type of school novice teachers worked at were included as possible control variables. Gender was dummy coded with 0 (*female*) and 1 (*male*). The type of school was measured with the five possible school types, but also dummy coded with 0 (*advanced schools*) and 1 (*other schools*) for subsequent analysis.[2]

Analyses

One statistical approach that offers the possibility to understand the development of health over time is LCGA, which is a person-centered approach that assumes the sample includes two or more subpopulations characterized by different patterns of growth parameters (Morin et al., 2018). Thereby, the results provide a system allowing the classification of individuals into distinct profiles that differ qualitatively and quantitatively. In the present study, LCGA was applied to differentiate trajectories of physical and mental health in an exploratory way, following recommendations by Wickrama et al. (2016) and van de Schoot et al. (2017).

The first step is to estimate a simple growth model - in our case, a linear growth model (Wickrama et al., 2016). The next step is to determine the optimal number of latent classes by applying an iterative process and comparing different possible models (Nylund et al., 2007). After deciding on the best model with several classes, one can integrate auxiliary variables and specify moderation or mediation models including the latent classes (McLarnon & O'Neill, 2018). When

[2] A full list of all items relevant to this study can be found in the appendix, Table A.1

integrating a predictor into the model, a multinomial regression is performed (Wickrama et al., 2016). To estimate the conditional models, we used the 3-step approach. This approach is superior to the 1-step approach since the estimation of class memberships remains stable while integrating predictors. For the simple inclusion of one or more predictors, the automated auxiliary option of Mplus was used, whereas the 3-step method was conducted manually for the mediation model (Wickrama et al., 2016).[3]

Results

Means and correlations are displayed in Table 2. A low but significant correlation within physical health across the three time points occurs. Correlations of mental health across the three time points are moderate and means of physical and mental health show a decrease in health over time. We found small but significant correlations of gender and age with physical health at the first time point. However, since the correlations of these two possible control variables with the other measures of physical health were not significant and neither with mental health, we decided not to include them in further analyses.

[3] Additional materials, including further statistical results of the person-centered approach as well as results of an analysis with the traditional variable-centered approach can be found in the appendix in Tables A.2, A.3, and A.4

Table 2 *Means, Standard Deviations, and Correlations (Study I)*

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 gender	0.29	0.45										
2 age	27.58	4.59	.14**									
3 school type	0.48	0.50	.16**	.03								
4 Physical health t1	54.60	4.75	-.07*	-.10**	-.01							
5 Physical health t2	54.15	5.71	-.03	-.06	-.03	.34**						
6 Physical health t3	54.31	5.61	.01	-.02	.02	.22**	.37**					
7 Mental health t1	50.55	7.79	.00	-.05	.02	-.19**	.05	.11**				
8 Mental health t2	47.12	9.88	.04	-.04	-.01	.02	-.19**	.11**	.46**			
9 Mental health t3	45.54	10.66	.04	-.01	-.04	.02	.04	-.02	.43**	.62**		
10 StaffCare t2	2.60	0.86	.02	-.11**	-.19**	.06	.01	.07	.13**	.21**	.17**	
11 PsyCap t2	4.12	0.91	.08*	.10**	-.00	.09*	.03	.07	.30**	.55**	.42**	.28**

Note. PsyCap = psychological capital; t1 = time 1, t2 = time 2, t3 = time 3; gender is coded 0 = female and 1 = male; school type is coded 0 = advanced schools and 1 = other school types; * $p < .05$, ** $p < .01$.

Note. PsyCap = psychological capital; t1 = time 1, t2 = time 2, t3 = time 3; gender is coded 0 = female and 1 = male; school type is coded 0 = advanced schools and 1 = other school types; * $p < .05$, ** $p < .01$.

Table 3 *Fit Indices for Latent Class Growth Models with Different Class Solutions (Study I)*

Model	Log L (df)	AIC	BIC	ABIC	LMR	Class sizes	Entr.
Physical Score							
C1 (k = 1)	-7093.06 (8)	14202.13	14239.36	14213.96		776	
C2 (k = 2)	-6992.42 (8)	14000.83	14038.07	14012.66	<.001	62, 714	.95
C3 (k = 3)	**-6871.94 (11)**	**13765.89**	**13817.08**	**13782.15**	**.04**	**40, 79, 657**	**.94**
C4 (k = 4)	-6799.73 (14)	13627.46	13692.62	13648.16	.002	635, 44, 84, 13	.95
C5 (k = 5)	-6762.70 (17)	13559.40	13638.52	13584.54	.11	626, 16, 48, 73, 13	.94
Mental Score							
C1 (k = 1)	-8217.41 (8)	16450.81	16488.04	16462.64		776	
C2 (k = 2)	-8157.78 (8)	16331.56	16368.80	16343.39	<.001	620, 156	.89
C3 (k = 3)	-8074.63 (11)	16171.26	16222.46	16187.53	.05	88, 566, 122	.88
C4 (k = 4)	**-8001.60 (14)**	**16031.20**	**16096.36**	**16051.90**	**.02**	**74, 49, 529, 124**	**.90**
C5 (k = 5)	-7976.80 (17)	15987.59	16066.71	16012.73	.21	36, 504, 79, 97, 60	.87

Note: Figures indicating the statistically most favorable class solution are in bold. AIC = Akaike information criterion, BIC = Bayesian Information Criterion, ABIC = Sample-size adjusted BIC, LMR = p-values of the Lo-Mendell-Rubin Adjusted Likelihood Ratio Test, Entr. = Entropy.

Latent Classes of Physical and Mental Health

We proposed that different trajectories of physical and mental health could be distinguished. Models with one to five classes were enumerated and compared (Table 3). We based our decision for one of these models on the significant decrease of fit parameters, on the entropy, and on interpretability. We used the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR-LRT), as it is the most robust and

therefore preferable test statistic (Nylund et al., 2007). Entropy is a measure of the classification accuracy (Wickrama et al., 2016) and is a standardized index with higher values indicating a better enumeration accuracy.

The three-class model of physical health fits the data well compared to the two-, four- or five-class models. Entropy is slightly higher for the two- and the four-class models (*Entropy* = .95) than for the three-class model (*Entropy* = .94). However, the smallest class in the four-class model only consisted of 13 individuals and interpretability of the three-class solution was better. The classes that can be observed (Figure 3) are a class with high and stable physical health (= resilient, 84%), one class with high initial physical health that significantly decreases over the first half year of teaching (= decreasing, 10%), and a class with low initial values of physical health that significantly increase over time (= increasing, 5%). In Table 4 the number of participants in each class as well as estimates of intercept and slope for the classes are depicted. The Wald test of parameter constraints shows that the intercepts of the classes significantly differ (*Wald* $\chi^2(2) = 130.58$, $p < .001$).

The LCGA of the mental health score revealed that a four-class solution best fits the data (Table 3). The decrease in fit indices is significant for the four-class model compared to the three-class model. Moreover, entropy is highest for the four-class solution (*Entropy* = .90) and interpretability is given. Most novice teachers belong to the resilient class (Figure 4) with high initial values in mental health and a slight but significant decrease (= resilient, 68%). A second class also starts with high initial mental health but experiences a steep significant decrease (= decreasing, 16%). The third class starts with rather low values of mental health but shows a significant increase over time (= increasing, 10%). The last class already starts with very low values of mental health that further decrease significantly within the first months of teaching (= low-chronic, 6%). The Wald test of parameter constraints shows that the

intercepts of the classes significantly differ ($\chi^2(3) = 329.24$, $p < .001$). Detailed tests of differences between the latent classes at all measurement points and plots for all possible class solutions can be found in the online supplementary materials. Overall, these results support our proposition, that different trajectories of physical and mental health in novice teachers exist. For both aspects of health, we find one class that shows a resilient trajectory. The membership probability to the latent classes of physical and mental health could not be predicted by the possible control variables gender, age, or school type. This further supports that these variables must not be taken into consideration.

Table 4 *Properties of Latent Classes of Physical and Mental Health (Study I)*

Variable	Class	*N* (%)	Intercept *B(SE)*	Slope *B(SE)*
Physical Score	Resilient	657 (84%)	55.69(.14)***	-0.08(.14)
	Decreasing	79 (10%)	51.16(1.20)***	-4.72(.51)***
	Increasing	40 (5%)	41.18(1.39)***	7.40(.92)***
Mental Score	Resilient	529 (68%)	53.59(.24)***	-1.38(.19)***
	Decreasing	124 (16%)	51.29(.80)***	-10.60(.53)***
	Increasing	74 (10%)	39.02(1.09)***	2.72(.97)**
	Low-chronic	49 (6%)	32.60(2.09)***	-3.11(1.10)**

Note: The number of participants in each class of physical and mental health is indicated in absolute numbers as well as in percent in parentheses. ** $p < .01$, *** $p < .001$

Health-Oriented Leadership and Psychological Capital as Predictors of Class Membership

Hypothesis 1 proposed that StaffCare predicts the probability of belonging to the stable compared to the nonstable trajectories of (a) physical and (b) mental health. Results of the 3-step method reveal that teachers experiencing higher levels of StaffCare are more likely to belong to the resilient compared to the decreasing trajectory of physical health (γ = -.58, *S.E.* = .24, *p* = .02; Table 5). The difference between the resilient and the increasing trajectory of physical health could not be predicted by StaffCare (γ = .01, *S.E.* = .30, *p* = .98).

For mental health trajectories, we find similar results. With high levels of HoL, it is more likely to belong to the resilient compared to the decreasing (γ = -48, *S.E.* = .20, *p* = .02) and the low-chronic trajectory (γ = -.98, *S.E.* = .32, *p* = .002). For the comparison between the increasing and the resilient class, StaffCare only marginally predicts class membership (γ = -.39, *S.E.* = .22, *p* = .08) with a higher probability to belong to the resilient class for higher StaffCare. Overall, Hypothesis 1 is partly supported.

We hypothesized that PsyCap as an internal resource predicts class membership (Hypothesis 2). For physical health trajectories, teachers with high PsyCap are more likely to belong to the resilient class (γ = -.52, *S.E.* = .15, *p* = .001). The comparison between the resilient and the increasing class of physical health cannot be predicted by PsyCap (γ = -.35, *S.E.* = .28, *p* = .22). Therefore, Hypothesis 2a is partly supported. Concerning mental health trajectories, we could show that with higher PsyCap, it is significantly more likely to belong to the resilient class compared to the decreasing class of mental health (γ = -1.31, *S.E.* = .21, *p* < .001), with increasing mental health (γ = -.61, *S.E.* = .26, *p* = .02), and with persistent low mental health (γ = -2.07, *S.E.* = .29, *p* < .001). Therefore, Hypothesis 2b is supported.

Figure 3 *Latent Trajectories of Physical Health (Study I)*

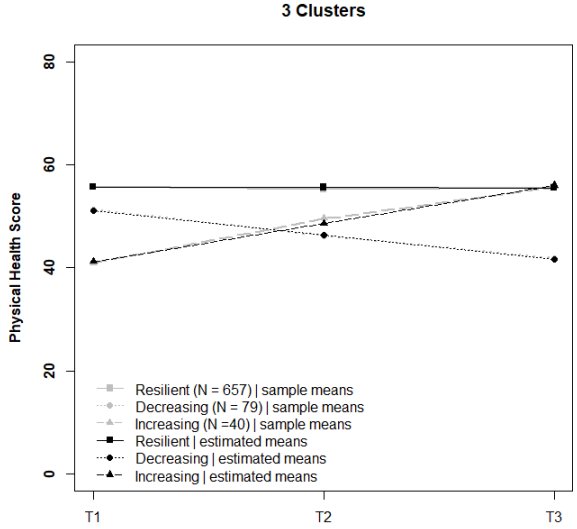
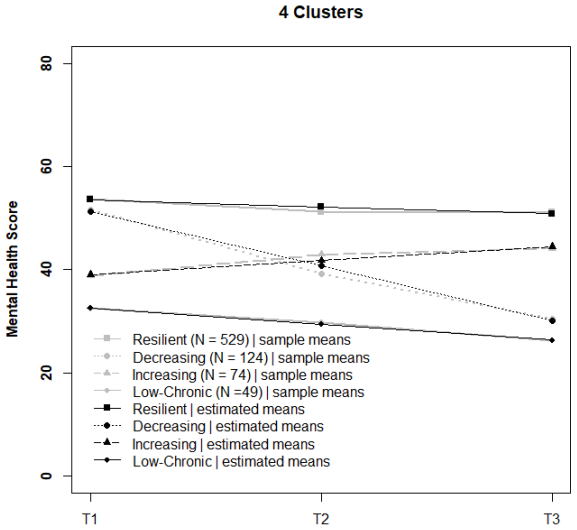


Figure 4 *Latent Trajectories of Mental Health (Study I)*



Note. Higher values indicate a higher health.

Table 5 *Predictors and Mediation Model for Trajectories of Physical and Mental Health (Study I)*

		Model 1	Model 2	Model 3
		γ(SE)	*γ(SE)*	*γ(SE)*
Physical Score				
Increasing vs. Resilient	StaffCare	0.01(.30)		0.14(.31)
	PsyCap		-0.35(.28)	-0.39(.29)
Decreasing vs. Resilient	StaffCare	-0.58(.24)*		-0.42(.26)
	PsyCap		-0.52(.15)***	-0.42(.17)*
Indirect effects	Increasing vs. Resilient			-0.14(.11)
	Decreasing vs. Resilient			-0.15(.07)*
Mental Score				
Decreasing vs. Resilient	StaffCare	-0.48(.20)*		-0.12(.28)
	PsyCap		-1.31(.21)***	-1.29(.31)***
Increasing vs. Resilient	StaffCare	-0.39(.22)†		-0.24(.25)
	PsyCap		-0.61(.26)*	-0.56(.28)*
Low-chronic vs. Resilient	StaffCare	-0.98(.32)**		-0.36(.42)
	PsyCap		-2.07(.29)***	-1.99(.38)***
Indirect effects	Decreasing vs. Resilient			-0.46(.14)***
	Increasing vs. Resilient			-0.20(.11)†
	Low-chronic vs. Resilient			-0.71(.20)***

Note: PsyCap = psychological capital; Model 1 = only StaffCare as predictor, Model 2 = only PsyCap as predictor, Model 3 = mediation of StaffCare – class membership relationship through PsyCap, γ = unstandardized estimate. * $p < .05$, ** $p < .01$, *** $p < .001$, † $p < .10$

Mediation Model

Hypothesis 3 indicates that the influence of StaffCare on class membership probabilities is mediated through PsyCap. For physical health, we found that high levels of experienced StaffCare are related to high levels of teachers' PsyCap (both measured at T2), which in turn makes it more likely they belong to the resilient class (γ = -.15, *S.E.* = .07, *p* = .02). The comparison of the increasing and the resilient trajectory again is not significant (γ = -.14, *S.E.* = .11, *p* = .19). Hypothesis 3a therefore is partly supported. For mental health trajectories as an outcome, results show that high StaffCare leads to higher PsyCap, which leads to a significantly higher probability of belonging to the resilient trajectory of mental health compared to the decreasing (γ = -.46, *S.E.* = .14, *p* = .001) and the low-chronic trajectory (γ = -.71, *S.E.* = .20, *p* < .001). The mediation model is only marginally significant for the resilient compared to the increasing trajectory (γ = -.20, *S.E.* = .11, *p* = .07) with higher StaffCare and PsyCap leading to a higher probability to belong to the resilient trajectory. Thus, hypothesis 3b is supported.

Additional Analysis

In addition to the mediation model with latent trajectories as outcomes, we estimated a simple mediation model for health at t3 as an outcome while controlling for health t2 (see appendix, Table A.3). The results show that StaffCare measured at t2 predicts PsyCap at t2 (*B* = .36, *S.E.* = .05, *p* < .001). PsyCap in turn predicts mental health at t3 (*B* = 1.19, *S.E.* = .52, *p* = .02) but not physical health (*B* = .29, *S.E.* = .29, *p* = .32). Similarly, the indirect effect of StaffCare on mental health via PsyCap is also significant (*B* = .42, *S.E.* = .20, *p* = .03), but not for physical health (*B* = .10, *S.E.* = .10, *p* = .32).

Discussion

Within a sample of novice teachers experiencing the transition from university to employment, we could find different trajectories of physical and mental health. Results reveal that StaffCare and PsyCap

predict the class membership of individuals and that indirect effects of StaffCare on class membership via PsyCap exist.

Theoretical and Practical Implications

The main finding that StaffCare and PsyCap as resources influence health supports earlier empirical findings (Avey, Reichard, et al., 2011; Franke et al., 2014). However, the results of this study extend previous findings in four important ways. First, prior studies on the impact of PsyCap on health focus on mental health outcomes, whereas physical health is seldom measured. The same holds for outcomes of StaffCare. Thereby, the empirical evidence on the role of PsyCap and StaffCare as resources for health is strengthened and broadened.

The second contribution is based on the longitudinal design of the study. Mental and physical health were measured at three time points with a lag of 10 weeks. With this design, we are able to bring adaptation theory to a sound test using health as an outcome (cf., Ellis et al., 2015). In our sample of novice teachers, we found three latent trajectories of physical health and four trajectories of mental health. Based on adaptation theory, we expected one class with stable health that quickly adapts to the new life situation. This could be supported for physical health, as LCGA revealed one stable trajectory with no significant slope. For mental health, LCGA yielded one rather stable trajectory but showing a slight decrease. These resilient trajectories in both cases are the largest ones, with 86% of participants belonging to this class for physical health and 67% of participants for mental health.

The trajectories with decreasing physical and mental health indicate a class with no positive adaptation during the socialization process. Hence, a quick and positive adaptation does not take place in all cases (see also Bonanno, 2004; Galatzer-Levy et al., 2018). Instead, some novice teachers show a strong reaction to the transition with deteriorating health. For mental health, we found a second decreasing trajectory (low-chronic). The participants belonging to this class (6.5%) seemed to experience very low levels of mental health at the beginning

of the induction period, which further deteriorated over the course of the next 5 months. It is striking that their mental health is particularly low - their self-reported mental health was nearly two standard deviations below the norm sample of the SF-12. Indeed, this seems to be a high-risk group for developing chronic mental health problems during their careers as teachers (Vilagut et al., 2013).

Moreover, we found an interesting trajectory of physical as well as mental health that shows an increase in health. For both aspects of health, this was only a small group of participants: 5% for physical health and 2% for mental health. The interpretation of this increasing trajectory is not clear. It seems likely that those novice teachers felt severely stressed by the thought of starting their induction period in the sense of anticipatory stress. Research on anticipatory stress shows that high levels of anticipating future stressors have negative effects on somatic complaints, endocrinological outcomes, and the immune system (Brosschot et al., 2006; Gaab et al., 2005), which thereby supports this assumption.

Taken together, the finding of these classes shows that applying adaptation theory to health as an outcome (Ellis et al., 2015) can be fruitful in differentiating between trajectories of health. Since individuals react differently to the transition from university to work, it is enriching to take a person-centered perspective. Moreover, COR theory can be expanded in not only stating that the availability of resources influences health (Hobfoll, 2011) but also trajectories of health. This broader conceptualization of health as trajectories further supports and strengthens COR theory, and follows the many calls to integrate time into occupational health research (Roe, 2008; Sonnentag, 2012). The person-centered approach to research on resources adds to the understanding of how the availability of internal and external resources shapes the development of health. With our study, we could show that high levels of resources conserve health.

The third contribution of this paper is an investigation of the predictors of positive adaptation to career entry as a major life event. Current work on predictors of adaptation focus on general support by the leader (Gruman & Saks, 2013; Sluss & Thompson, 2012). We expand these findings by showing that the external resource of leadership specific for health and the internal resource of PsyCap predict membership to the latent trajectories of health. This prognostic value is particularly interesting since the mediation analysis with physical health at t3 as an outcome is not significant (see additional analysis) and bivariate correlations of physical health with StaffCare and PsyCap are low, and most are not significant. However, concerning the trajectories of physical health, we find that StaffCare and PsyCap are significant predictors for the probability of belonging to the resilient compared to the decreasing class. Since both predictors were measured at t2 and trajectories were built with values from t1 to t3, the timely order and causality should be interpreted cautiously. However, this is a challenge inherent in the research on newcomers and organizational socialization. It is important to incorporate a baseline measure of health and well-being; however, possible predictors, such as social support or leadership behavior, are experienced after this baseline measure (see also Tims et al., 2013; Valero & Hirschi, 2019).

Fourth, the results on mediation effects further support COR theory, which states that the availability of resources triggers further resource gain and, in consequence, also health (Hobfoll, 2011). We could show that the external resource StaffCare leads to acquiring additional personal resources in the form of PsyCap, which helps protect physical and mental health in times of stress. This supports the notion of gain spirals of COR theory with one set of resources specific to the occupational context.

Overall, fortunately, most novice teachers remain mentally and physically healthy during the first 5 months of their occupational life. Nevertheless, it is important to strengthen internal and external

resources since they can predict the probability of staying healthy in this demanding time. Behavioral and relational interventions must be used together since external resources influence internal resources. Given that leadership behavior is trainable (Kelloway & Barling, 2010), it is a possibility for interventions to create more resources at the availability of employees. Current research points out the possibilities of leadership training and its beneficial role for employees' health and well-being (e.g., Dimoff & Kelloway, 2019). In addition to this, personal resources can be directly trained. A recent meta-analysis showed that PsyCap interventions are effective (Lupșa et al., 2020). Moreover, since the intercepts of the trajectories of physical and mental health already differ at the beginning of the career of novice teachers, it could help to conduct a screening and offer tailored interventions and support for those with low health when starting teaching. By addressing health topics this early in the career of young teachers, one could prevent the common problems of teacher shortage (OECD, 2005) and high values in burnout and measures of mental strain in teachers.

Limitations and Future Research

Although our study provides strong empirical evidence for the process of adaptation in novice teachers, it has its limitations. First, we used single-source data from the novice teachers and therefore common method bias might occur. Objective measures of health would have been a possible alternative to self-reported health. However, on the one hand, practical reasons of feasibility (e.g., privacy guidelines) argued against it; on the other hand, it was not our goal to assess how the clinical diagnoses of health impairment result in trajectories of adaptation but rather to study subclinical differences in health.

A second limitation is the healthy worker effect. Novice teachers who dropped out of the sample showed lower physical health than participants who answered all questionnaires. Due to this bias, generalizability to the whole population of novice teachers is restricted. Nevertheless, we found a considerable variation in physical as well as

mental health. Even though the small restriction in the variance of physical health would lead to an underestimation of the effects, we found effects of StaffCare and PsyCap on physical health.

Third, we chose the specific time lags of 10 weeks between the measurements. In this time span, changes in physical and mental health are likely to occur. Yet, different time lags would have been possible and could have led to divergent results. Moreover, three time points only allowed for linear modeling of trajectories. Future research on the development of the health of newcomers needs to focus on data with four or more time points to account for possible nonlinear trajectories.

Although the sample was mixed in gender, age, school type, and combination of subjects they teach to minimize constraints of external validity, all participants have the same occupation. We chose this specific occupational group since teacher shortage (OECD, 2005) and burnout in teachers (Schaarschmidt, 2005) are prevalent problems that need to be addressed to provide high-quality education. Future research could address adaptation at career entry by applying this design to other occupations. Moreover, future research could include a broader range of internal and external resources.

Health-Oriented Leadership for Resilience in Times of Crisis

Abstract

The COVID-19 pandemic has heavily impacted the organization of work and education, and keeping employees healthy and productive in the face of these challenges is of great importance to organizations and institutions. Resilience is defined as staying healthy and maintaining performance despite high stressors, and leadership is theorized to be a job resource contributing to employee resilience. Thus, in this paper, we report on the relationship between school principals' StaffCare as defined within the concept of health-oriented leadership (HoL) and teachers' demonstration of resilience. The psychosocial safety climate and positive psychological capital (PsyCap) are considered mechanisms in this relationship. A sample of teachers from Germany took part in a longitudinal survey study with two measurement points in Autumn/Winter 2018, before the pandemic, and a third during the partial reopening of schools during the pandemic in Spring 2020. Resilience is operationalized as the residuals of a regression of job demands with mental strain. The results show that StaffCare does not directly relate to teachers' demonstration of resilience during the pandemic. However, the indirect relationship between StaffCare and the demonstration of resilience via the psychosocial safety climate and PsyCap is supported. These findings underline the importance of leadership, personal resources, and climate for employee resilience. Moreover, practical implications indicate that leaders should be trained to show more StaffCare and that teachers can benefit from training regarding personal resources to prepare for crises.

Keywords: demonstration of resilience, health-oriented leadership, psychosocial safety climate, psychological capital, COVID-19

Introduction

Crises such as the COVID-19 pandemic have the potential to induce stress and, thus, mental health problems (A. M. Lee et al., 2007; Pfefferbaum et al., 2012; Sinclair et al., 2020), and the detrimental effects of the COVID-19 pandemic on mental health have been documented across countries and occupational fields (Britt et al., 2020; S. A. Lee et al., 2020; van Zoonen & Hoeven, 2021; Zacher & Rudolph, 2021). Moreover, negative effects on performance can be expected (Hoogh et al., 2004; Waldman et al., 2001) and have been reported during the COVID-19 pandemic (Feng & Savani, 2020; Sasaki et al., 2020). The resilience of employees can help to mitigate such negative effects since it helps employees to overcome the challenges of the pandemic and succeed at work (King et al., 2016). Three perspectives in resilience research can be distinguished, namely resilience as a trait, resilience as a process, and resilience as an outcome (D. M. Fisher & Law, 2021). The current focus of workplace resilience research is on the trait perspective (Cheng et al., 2020; Hartmann et al., 2020). This entails the risk of only studying a limited part of the larger longitudinal and complex resilience process (Cheng et al., 2020; D. M. Fisher & Law, 2021), which also limits the possible practical implications of the research. Therefore, in this paper, we study resilience as an outcome and aim to answer the question of whether leadership in stable times can prepare employees to demonstrate resilience in times of crisis (Figure 5).

Previous literature has shown the importance of leadership during a crisis (Boin et al., 2013; Gilstrap et al., 2016; Stern, 2013). During the COVID-19 pandemic, it has already been shown that autonomy-supportive leadership (Collie, 2021) or servant leadership (Hu et al., 2020) is beneficial for employees. We would like to add the perspective that leaders can prepare their teams for unforeseen events through leadership during the stable times preceding these events (Smith & Riley, 2012). As Fernandez and Shaw (2020) stated, leaders should establish a culture of collaboration and trust prior to a crisis to enhance

the ability of their institutions to adapt to a crisis such as the COVID-19 pandemic. Since the impact of a crisis on the workplace draws much attention, the achievement of usual high-priority goals is threatened (Osborn et al., 2002). Moreover, the state of crisis entails that the reaction time to new developments is usually limited (Osborn et al., 2002). This makes leadership during the crisis challenging, prompting us to consider that leaders could prepare for times of crisis with positive forms of leadership before the occurrence of the crisis. Therefore, we suggest that StaffCare (Franke et al., 2014), as a form of leadership focused on followers' health, can influence employee resilience in times of crisis. StaffCare has previously been shown to positively impact well-being (for an overview see Rudolph, Murphy, & Zacher, 2020), but only one study has looked at the relationship between StaffCare and resilience (M. Arnold & Rigotti, 2021).

To gain a deeper understanding of how the effect of StaffCare on the demonstration of resilience unfolds, we suggest two mediators, comprising one external and one internal resource, namely the psychosocial safety climate (Dollard & Bakker, 2010) and positive psychological capital (PsyCap; Luthans, Youssef, & Avolio, 2007). The employee-oriented nature of StaffCare should help to encourage a stable and positive climate within an organization (Zohar & Tenne-Gazit, 2008). Therefore, we propose the psychosocial safety climate, defined as the "policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard & Bakker, 2010, p. 579), as a mediating mechanism between leadership and resilience (Rudolph, Allan, et al., 2020). We focus on this form of climate specific to health and safety since it is especially relevant to resilience as an outcome (Taylor et al., 2019). In addition to this aspect of the working climate, we aim to test the personal resource of PsyCap (consisting of hope, self-efficacy, resilience, and optimism; Luthans, Youssef, & Avolio, 2007) as a mediator. These personal resources conform to the traditional understanding of resilience as resilience-promoting factors (Helmreich et al., 2017). Moreover, leadership in general exerts its influence on

followers' well-being and performance in part via the promotion of employees' personal resources (Luthans & Youssef-Morgan, 2017).

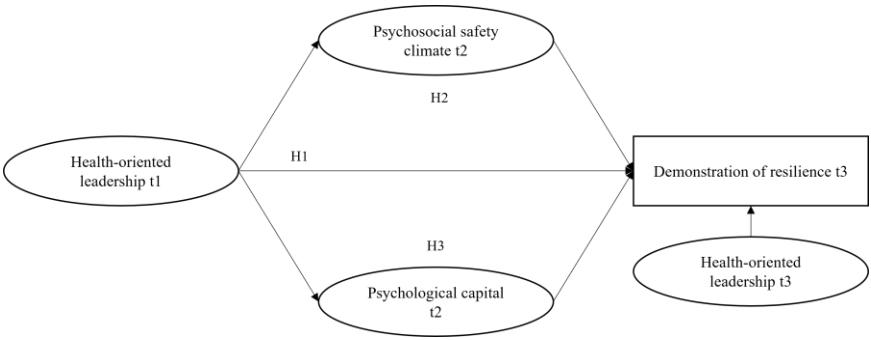
The contribution of this study is three-fold. First, we offer an application of the outcome perspective of resilience in the workplace during the COVID-19 pandemic, which has previously been proposed in the field of clinical psychology (Schueler et al., 2020; van Harmelen et al., 2017; Veer et al., 2021). Workplace resilience as an outcome can be operationalized as the divergence of individuals from the predicted regression of strain on job stressors. Only by accounting for the level of stressor exposure can a meaningful inference be drawn for the demonstration of resilience (Veer et al., 2021). This "definition of resilience is appealing, as it does not rely on individuals to accurately report on a 'higher level' of observation" (Amstadter et al., 2014, p. 279). The approach to measure demonstrations of resilience as regression residuals provides an innovative metric of resilience in the organizational context.

Second, we aim to answer the question of how to best prepare for a crisis through leadership. We examine StaffCare as an antecedent in stable times and test whether it can predict the demonstration of resilience during the COVID-19 crisis. Moreover, we contribute to research on the concept of StaffCare by broadening the scope of its potential outcomes since earlier studies have focused on mental well-being as an outcome (Franke et al., 2014; Kaluza, Schuh, et al., 2020; Santa Maria et al., 2020). Furthermore, by introducing the psychosocial safety climate and PsyCap as mechanisms for the long-term benefit of leadership, we follow the call of Fischer et al. (2017) to explore the processes linking leadership variables to employee outcomes.

Third, we aim to integrate the largely separate research avenues of leadership and resilience (Hartmann et al., 2020). Resilience research risks burdening the individual with a high responsibility for their own well-being (Bal et al., 2020). However, evidence has shown that leaders can contribute to employee resilience through their leadership style (M.

Arnold & Rigotti, 2021; Hartmann et al., 2020). This paper shows how the theoretical framework of resilience allows for including leadership as a resilience factor and, thus, distributes the burden of staying healthy, despite a high stressor load, between the employee and the leader.

Figure 5 *Research Model (Study II)*



Note. t1 and t2 during the school year 2018/19 with a 3-month time lag, t3 during the COVID-19 pandemic in 2020.

Three Perspectives on Resilience

The research on resilience can be separated into three avenues (D. M. Fisher & Law, 2021). Within the trait/capacity approach, personal or situational attributes are studied, which might be helpful if or when adversity occurs but that exist independent of the presence of adversity (D. M. Fisher & Law, 2021). The outcome approach to resilience considers resilience as a "pattern of outcomes that one might expect if adversity has been successfully managed" (D. M. Fisher et al., 2019, p. 589). In the process approach, the focus is on what individuals do to cope with adversity (D. M. Fisher et al., 2019). Within this study, we apply a combination of the capacity approach and the outcome

approach. Thus, we define resilience as “positive adaptation within the context of significant adversity” (Luthar et al., 2000, p. 543).

The integrative model of employee resilience that Britt et al. (2016) proposed combines the three perspectives of resilience. Individuals that are confronted with adversity go through a process of trying to handle the adversity (*resilience mechanisms*; D. M. Fisher et al., 2019; Hartmann et al., 2020; Kalisch et al., 2017). This resilience process can be influenced by personal, situational, and social resources (*resilience (promoting) factors;* D. M. Fisher et al., 2019; Hartmann et al., 2020; Kalisch et al., 2015). In the case of a successful resilience process, employees that are confronted with adversity show positive adaptation (or *the demonstration of resilience*). This demonstration of resilience in the working context can be displayed as maintained job performance, low symptoms of strain, and high well-being (Britt et al., 2016). In earlier research on resilience at the workplace, questionnaires were used to measure the demonstration of resilience. However, “it does not make much sense to equate resilience with a score on a resilience questionnaire” (Kalisch et al., 2017, p. 786) since this form of operationalization is at the meta-level: The participant has to think of past adversities or a hypothetical adversity that may occur in the future (Amstadter et al., 2014). Instead, to adequately operationalize resilience and understand its underlying processes, the demonstration of resilience should be directly measured. Studies from the field of clinical psychology have shown that the demonstration of resilience can be operationalized by measuring symptoms of mental impairment in relation to the stressor load (e.g., Amstadter et al., 2014).

Therefore, in this study, we examine work stressors during the COVID-19 pandemic, one form of an adverse situation in which employees must quickly adapt to significant changes in their work environment. When studying resilience in the work context, the stressors “[do] not have to be classified as a trauma for individuals to be significantly affected by [them]” (Conley et al., 2016, p. 494). To

measure the demonstration of resilience, the mental strain of teachers is related to their perceived stressor load. We define mental strain as the feeling of being emotionally irritated induced by the work environment, as well as having difficulties cognitively detaching oneself from work during leisure time (irritation; Mohr et al., 2005). A positive deviation from the regression of work stressors with mental strain characterizes an employee as less resilient than the overall sample, while a negative deviation means that a participant is more resilient than the overall sample (Figure 6).

The focus of organizational research on predictors of resilience to date has mainly been on personal characteristics (King et al., 2016). In this study, we aim to combine the research of personal resources with the idea that leadership as an environmental resource enables employees to demonstrate resilience when faced with adversity. One conceptualization of leadership that seems well-suited to help employees adapt to difficult circumstances is HoL.

Health-Oriented Leadership and the Demonstration of Resilience

HoL is a leadership approach that was developed to target the health of employees (Franke et al., 2014; Franke et al., 2015). HoL incorporates the follower-directed (StaffCare) and self-directed cognitions and behaviors (SelfCare) of leadership specific to one's own health or the health of one's followers (Franke et al., 2014). In this study, we exclusively consider the two cognitive aspects of StaffCare, namely health awareness and the value of health. Health awareness is defined as a leaders' attention to, reflection on, and sensitivity toward the health, work-related strain, and working conditions of their employees. Meanwhile, the value of health is defined as the level of importance given to, and the leaders' sense of responsibility for, employees' health (Franke et al., 2014). In general, cognitions have been shown to be more stable than behavior (Diener & Larsen, 1984) and, thus, should be more relevant in the long term. Moreover, the cognitive StaffCare aspects of awareness and value have been shown to positively relate to work

ability over two years, while this relationship is not significant for the health behavior of the leader (Pundt & Felfe, 2017). Empirical studies have also shown that StaffCare is positively related to followers' health (M. Arnold & Rigotti, 2021; Franke et al., 2014; Santa Maria et al., 2020) and work engagement (Kaluza, Schuh, et al., 2020), while it is negatively related to mental stress (Vonderlin et al., 2020), burnout (Horstmann, 2018; Kranabetter & Niessen, 2017), irritation (Franke et al., 2014), emotional exhaustion (Kaluza, Schuh, et al., 2020), and somatic complaints (Köppe et al., 2018).

According to the integrative model of employee resilience (Britt et al., 2016), unit resources positively influence the resilience process and the demonstration of resilience. Moreover, the theoretical work of D. M. Fisher et al. (2019) suggests that the resources in one's environment can contribute to showing a resilient response. An example of a resilience-promoting factor is stable and supportive social relationships (D. M. Fisher et al., 2019). Thus, the availability of external resources should protect the mental health of employees when facing stressors in the workplace. One such external resource is offered through leadership. Among others, Inceoglu et al. (2018) assigned a pivotal role to leadership for the performance, well-being, and work behavior of followers. Thus, it seems reasonable to assume that leadership also shows a positive relationship with the demonstration of resilience.

StaffCare has the potential to foster resilience in employees in the long term. The concept was developed to address employees' autonomous health behavior in the workplace (Franke et al., 2014), thus enabling employees and establishing an equitable relationship between leaders and followers. The motivational and cognitive aspects of the value of health and health awareness are especially relevant for employee resilience in a crisis. When leaders attach high importance to employee health and are aware of their followers' stressors and strains, employees will recognize that the leader cares for them and will feel that their leader takes them seriously (Franke et al., 2014), which should

have a long-lasting positive effect on them. An employee can still know that their leader, in general, attaches high value and awareness to the topic of health, even if the acute situation of high stressors and remote working might only allow them to show a limited array of health-oriented behavior. Thus, we hypothesized that:

Hypothesis 1: StaffCare has a positive relationship with the demonstration of resilience.

The Psychosocial Safety Climate as a Mediator

Fischer et al. (2017) argued that it is important to understand which mediators are drivers of the effects of leadership on employees. As Inceoglu et al. (2018) pointed out, context variables, such as organizational climate, have been largely ignored as mechanisms in this relationship and should be considered as mediators in future research. One form of climate specific to mental health is the concept of the psychosocial safety climate, which Dollard and Bakker (2010) introduced and which they defined as the shared perception of "policies, practices, and procedures for the protection of worker psychological health and safety" (p. 579). The psychosocial safety climate can be integrated into the resilience model of Britt et al. (2016) as a unit resource that influences employees' demonstration of resilience. It is assumed that management shapes the psychosocial safety climate and that it, in turn, exerts an influence on the work environment and mental health of employees (Dollard & Bakker, 2010). This is especially true for schools as a working context since a principal occupies a central role and, thus, can have a strong influence on the climate within a school (Gülşen & Gülenay, 2014; H. E. Price, 2012). Accordingly, we proposed that the psychosocial safety climate is an important mediator in the relationship between StaffCare and the demonstration of resilience.

Leaders shape the culture and climate present within their organization (Dragoni, 2005; Ostroff et al., 2013), and it is likely that different leadership styles will influence the level of the psychosocial safety climate (Barling et al., 2002; Zohar, 2002; Zohar & Tenne-Gazit,

2008). StaffCare fosters communication about general health topics and the specific health problems of employees (Franke et al., 2014) within the work unit. If employees seem to be experiencing strain, leaders with high StaffCare can aim to find solutions with the employee by prioritizing working tasks and motivating them to participate in workplace health-promotion offers (Franke et al., 2014). This shows the leaders' high level of awareness regarding the topic of health and that they attach great value to the health of their employees (Franke et al., 2014). Thus, StaffCare should also contribute to followers perceiving their leaders as committed to psychological safety and communicating more about mental health. This should increase employees' participation in psychological safety, leading to the experience of a better psychosocial safety climate in the working unit. However, we are not aware of any studies linking StaffCare specifically to the psychosocial safety climate, but a positive relationship between StaffCare and the general climate has been reported (Franke et al., 2014).

Since the psychosocial safety climate offers clear guidance on how employees can communicate concerns regarding their mental strain, and it is likely that leaders will take such concerns seriously and act upon them (Dormann et al., 2018), a direct relationship between the psychosocial safety climate and the demonstration of resilience is plausible. Furthermore, the psychosocial safety climate has been shown to have a direct negative relationship with depression (Dollard & Bakker, 2010; Owen et al., 2016), psychological distress (Idris et al., 2012), emotional exhaustion (Bailey et al., 2015; Idris et al., 2014; Yulita et al., 2017), and burnout (Huyghebaert et al., 2018). To our knowledge, however, the psychosocial safety climate has not been studied as a mediator between leadership and resilience. However, empirical evidence has shown that the psychosocial safety climate mediates the relationship between ethical leadership and creativity (Tu et al., 2019) and that a culture of health mediates the relationship between health-promoting leadership and irritation (Gurt & Elke, 2009). Taken together,

these theoretical considerations and empirical evidence lead to the following hypothesis:

Hypothesis 2: The psychosocial safety climate mediates the relationship between StaffCare and the demonstration of resilience.

Positive Psychological Capital as a Mediator

In addition to leaders shaping the work environment in the form of the climate, they also influence individuals within their teams. In their taxonomy of the mechanisms of leadership, Fischer et al. (2017) argued that one needs to differentiate between the development of individual resources (such as empathy) and the leveraging of general individual resources (such as self-efficacy) as mechanisms of leadership. In this context, "leveraging refers to the impact on constructs […] that facilitate the use of resources, such as the expertise of followers" (Fischer et al., 2017, p. 1732). One theoretical construct that encompasses multiple individual resources that leaders can foster is PsyCap (Luthans, Youssef, & Avolio, 2007). PsyCap can be defined as "an individual's positive psychological state of development" (Luthans, Youssef, & Avolio, 2007, p. 3), and it consists of the aspects of hope, self-efficacy, resilience, and optimism (Luthans, Youssef, & Avolio, 2007; Madrid et al., 2018). Resilience here has to be understood as a measure of the capacity for resilience (a resilience-promoting factor) that is independent of the occurrence of adversity. Moreover, self-efficacy and optimism are two of many meta-analytically confirmed resilience-promoting factors (Helmreich et al., 2017).

PsyCap is generally seen and defined as a personal resource that is malleable (Luthans & Youssef-Morgan, 2017). Since it is a work-related motivational state (Luthans & Youssef-Morgan, 2017), leaders should be able to influence the PsyCap of their followers (cf. Linnenluecke, 2017). This also includes StaffCare, which we hypothesize to be related to the PsyCap of followers. Through the aspect of the importance of health, managers convey to their followers that they are concerned about the health of their followers and take responsibility for it (Franke et al.,

2014). Viewing their leader as a role model, this should encourage followers to take on more responsibility for themselves, thus promoting their self-efficacy. Furthermore, StaffCare can nurture hope in employees as they realize which pathways lead toward personal growth (cf. Woolley et al., 2011). Moreover, especially regarding the aspect of awareness of the state of health and strain that employees experience, the manager's focus is on each individual (Franke et al., 2015). By discerning which situations are perceived as particularly stressful, the leader conveys to their employees that they can actively shape their work goals and work environment in the interests of their own health. This enables employees to experience a sense of control, perceive themselves as effective in the work environment, and set goals and pathways while focusing on health.

Studies have shown that different types of leadership, such as transformational leadership (Gooty et al., 2009; McMurray et al., 2010), empowering leadership (Gyu Park et al., 2017), authentic leadership (Avey, 2014; Rego et al., 2012; Woolley et al., 2011) or a leaders' authenticity (Song et al., 2021), ethical leadership (Avey, 2014), and humble leadership (Wang et al., 2018), are positively related to PsyCap. One study of M. Arnold and Rigotti (2021) confirmed the mediating role of PsyCap between StaffCare and the successful adaptation of newcomers to their work environment. We add to these findings by studying the demonstration of resilience during the COVID-19 pandemic as an outcome of this process.

Both the integrative model of employee resilience of Britt et al. (2016) and the conceptual work on resilience of D. M. Fisher et al. (2019) proposed that individual resources can make showing a resilient reaction when faced with adversity more probable. Britt et al. (2016) incorporated individual resources as a factor of an employees' capacity for resilience. Likewise, D. M. Fisher et al. (2019) assumed that personal resources can act as resilience-promoting factors. Examples of such resources within the resilience literature are self-efficacy, problem-

solving skills, an internal locus of control, and hope or a positive outlook (D. M. Fisher et al., 2019). Thus, by combining the resource-based approach and the outcome-based approach of resilience, we can assume that PsyCap, as an amalgamation of the four personal resources often studied in the context of resilience capacity, should contribute to employees demonstrating resilience during the pandemic. Furthermore, empirical studies have supported the notion that PsyCap can contribute to the demonstration of resilience. Defining the lockdown during the COVID-19 pandemic as a significant adversity, Pellerin et al. (2021) showed that optimism, self-efficacy, and hope are all relevant predictors when considering membership in trajectories of depression and anxiety during the pandemic. Moreover, Strauss et al. (2015) found a positive relationship between hope and task adaptivity.

Based on the leadership process model (Fischer et al., 2017) and the theoretical works on resilience (Britt et al., 2016; D. M. Fisher et al., 2019), it is plausible to assume that PsyCap, as a higher-order construct of personal resources, mediates the relationship between pre-pandemic StaffCare and the demonstration of resilience during the pandemic. Thus, we propose the following hypothesis:

Hypothesis 3: PsyCap mediates the relationship between StaffCare and the demonstration of resilience.

Methods

Procedure and Sample

The study was conducted as an online survey of public and private schools in Germany. The first questionnaire was administered four weeks after the summer holidays in September/October 2018. The second survey took place three months after the first questionnaire in December 2018/January 2019. Two further questionnaires were administered during the school year of 2018/19 but were not of interest for the data used in the present study. The third time point was during the spread of the COVID-19 pandemic in Germany between April and

June 2020. During this time, schools were in a phase of partially reopening after the lockdown and were providing lessons for smaller groups of pupils in the school building, in addition to online lessons. Overall, 1,845 teachers and pedagogical staff from 231 schools took part in the survey (n_{t1} = 1,359, n_{t2} = 1,117, n_{t3} = 169).[4] Their average age was 46.13 years (*SD* = 10.44), with a range of 26 to 82 years. Most participants identified as female (76%). In addition, most participants were teachers (95.4%), while 1.1% were social workers and 3.4% held another position at the school. The participants worked as pedagogical staff for 14.45 years on average (*SD* = 9.87). The span of the control of one principal was 58 teachers on average. A dropout analysis showed that participants who took part in the third survey did not differ from the participants who did not participate in t3 regarding demographic variables (age, gender, tenure as a teacher, tenure at the school) nor regarding the study variables that were assessed at t1/t2 (StaffCare, irritation, the psychosocial safety climate, and PsyCap). Slight differences were observed for the type of school and federal state (more participants at t3 from special schools, vocational schools, and comprehensive schools, and more participants from Lower Saxony, North Rhine-Westphalia, Rhineland-Palatinate, and Saxony, at t3 than expected from the distribution at t1/t2). Furthermore, *n* = 102 teachers from 11 different schools had to be excluded from the hypothesis tests since they indicated that the position of school principal had been reassigned between the two school years.

Measures

StaffCare was measured at t1 in pre-pandemic times and at t3 during the pandemic. The psychosocial safety climate and PsyCap were

[4] The difference between the overall participant number and the number of participants at each time point exists because not all participants took part in all surveys.

measured at t2, also pre-pandemic, but three months after t1. Job demands and irritation were measured at t3 during the pandemic and were used to indicate the resilience of employees. Answers were given on a 5-point Likert scale, with 1 expressing low values and 5 expressing high values unless indicated otherwise.[5]

Health-Oriented Leadership. We used the subscales of health awareness and the value of health from the StaffCare questionnaire by Franke et al. (2014) at t1 and t3 and slightly adapted the wording to the school context. The questionnaire consists of six items for health awareness and three items for the value of health. Sample items included, "My school principal realizes when I arrive at my personal health limits" (awareness) and "My health is important to my school principal" (value). To test the factorial invariance of the StaffCare scale, we conducted a confirmatory factor analysis comparing a two-factor model without restrictions (χ^2(df) = 938.45 (129), root mean square error of approximation [*RMSEA*] = .07, comparative fit index [*CFI*] = .91, Tucker-Lewis index [*TLI*] = .90, standardized root mean square residual [*SRMR*] = .06) to a model with weak factorial invariance imposed (χ^2(df) = 954.26 (136), *RMSEA* = .07, *CFI* = .91, *TLI* = .90, *SRMR* = .07). Following the recommendations of Cheung and Rensvold (2002), we interpreted the CFI as a goodness-of-fit index. As the change in the CFI without and with factorial invariance was < .01, the assumption of factorial invariance was supported. The internal consistency of the overall scale was excellent, with a Cronbach's α of .92/.93 ($\alpha_{awareness}$ = .88/.91; α_{value} = .90/.94). We modeled StaffCare as a latent factor, with the two subscales as parcels.

The Psychosocial Safety Climate. Dollard and Bakker (2010) developed a measure of the psychosocial safety climate, and Dollard

[5] A full list of all items relevant to this study can be found in the appendix, Table A.5

(2019) validated a 4-item short version thereof. We measured the psychosocial safety climate with this short version at t2. A sample item was, “Employees’ contributions to resolving occupational health and safety concerns in the school are listened to”. The internal consistency of the scale was satisfactory, with a Cronbach’s α of .85. Further, we modeled the psychosocial safety climate as a latent factor.

Psychological Capital. We measured PsyCap with the scale that Luthans, Youssef, and Avolio (2007) developed and Avey, Avolio, and Luthans (2011) shortened, which consisted of 13 items. A sample item was, “If I should find myself in a jam trying to solve this situation, I could think of many ways to get out of it”. Answers were given on a 6-point Likert scale, with responses ranging from 1 (*does not apply at all*) to 6 (*totally applies*). The internal consistency of the overall scale was excellent, with a Cronbach’s α of .92 (α_{hope} = .78; $\alpha_{self\text{-}efficacy}$ = .81; $\alpha_{resilience}$ = .69; $\alpha_{optimism}$ = .74). Confirmatory factor analysis revealed that the 4-factor model (χ^2(df) = 531.22 (59), *RMSEA* = .09, *CFI* = .88, *TLI* = .91, *SRMR* = .04) had a significantly better fit to the data than the 1-factor model (χ^2(df) = 680.29 (65), *RMSEA* = .09, *CFI* = .89, *TLI* = .87, *SRMR* = .05; $\Delta\chi^2$(df) = 149.07(6), $p < .001$). Therefore, PsyCap was modeled as a latent factor, with the four subscales as parcels.

The Demonstration of Resilience. To gain an understanding of the job demands that teachers have been experiencing during the pandemic, we measured four different job demands and used them as a compound measure for stressor exposure at t3. It is important to not only look at one specific stressor to measure resilience in the face of the stressor load but to look at different potential stressors (Kalisch et al., 2015). Thus, emotional demands were measured with four items stemming from Krause (2004), an example of which was, “Part of my job is to suppress my own feelings (e.g., anger, dislike) when dealing with others”. Role conflict (three items) and role ambiguity (three items) were assessed with an instrument that Bowling et al. (2017) developed. An example was, “I have to deal with competing demands at work”. In

addition, time pressure was assessed with five items from Semmer et al. (1998), such as “How often do you experience time pressure?” The overall internal consistency of the scale was satisfactory, with a Cronbach’s α of .84.

Irritation was measured with the instrument that Mohr et al. (2005) developed. This instrument consists of eight items on the two aspects of cognitive irritation (three items) and emotional irritation (five items). Example items were, “Even at home, I often think of my problems at work” for cognitive irritation and “I get irritated easily, although I don’t want this to happen” for emotional irritation. Answers were given on a 7-point Likert scale, with the endpoints of 1 (*strongly disagree*) and 7 (*strongly agree*). To give a more holistic overview of mental health during a crisis, we formed an overall score for irritation. The internal consistency of the scale was excellent, with a Cronbach’s α of .91.

To measure the demonstration of resilience, we computed the weighted residuals of the regression between job demands and irritation. This is described in the next chapter.

Control Variable. We assessed school principals’ span of control as a control variable. Span of control is defined as “the number of workers who report to a manager or supervisor” (Cathcart et al., 2004, p. 395). We assumed that principals with a larger span of control might have more difficulties caring for the health and demonstration of resilience of each individual teacher (Turgut et al., 2020). Therefore, it was expected that span of control would be a confounding variable. The information on span of control was obtained from the school principals to avoid imprecisions among teachers within the same school.

Analyses

As a first step, the value of the demonstration of resilience for each participant was calculated as follows: The residuals of the relationship of job demands with irritation were calculated by applying regression analysis, taking into account the nested structure of the data in MPlus

(type = complex option; Muthén & Muthén, 1998–2017). The deviance of an individual value from the persons' expected value was then calculated based on the regression equation (cf. van Harmelen et al., 2017; Veer et al., 2021). To simplify the interpretation of the results, the residuals of the regression of job demands with irritation were inverted. Lastly, the amount of job demands was used as a weight for the residuals. Thus, we accounted for the fact that a large deviance from the regression was a stronger sign of resilience for a high stressor load than for a low stressor load.

Afterward, these residuals were treated as an outcome variable in the models to test the hypotheses. The mediation model was tested in MPlus following the recommendations of Preacher and Hayes (2004) and Stride et al. (2015). Since we did not have differential hypotheses at the within or between levels of analysis, we accounted for the nested structure of the data (teachers nested within schools) by using the type = complex option (Muthén & Muthén, 1998–2017). Here, span of control was integrated as a control variable. The standard error and confidence interval for the indirect effect were computed with the R package RMediation using the Monte Carlo approach (Tofighi & MacKinnon, 2011).

Results

Descriptives

The correlations between all study variables are depicted in Table 6. They indicate a positive relationship between StaffCare and the two mediators (the psychosocial safety climate and PsyCap). We observed a positive autocorrelation between StaffCare at t1 and StaffCare at t3. Moreover, the bivariate correlations showed that job demands and irritation at t3 were positively related, already indicating a relationship between these indicators used to construe the demonstration of resilience. Moreover, we found a positive and significant relationship between PsyCap and the demonstration of resilience but not between the psychosocial safety climate and the demonstration of resilience.

However, PsyCap and the psychosocial safety climate showed a significantly positive relationship. The intraclass correlations were rather low, with the highest value for StaffCare at t1 (28% of variance between schools), followed by the psychosocial safety climate (25% of variance between schools).

The random-intercept fixed-slope multilevel regression for demands with irritation revealed a significant positive relationship (B = 1.03, SE = 0.14, $p < .001$). The regression results, together with sample values, are depicted in Figure 6.

Test of the Hypotheses

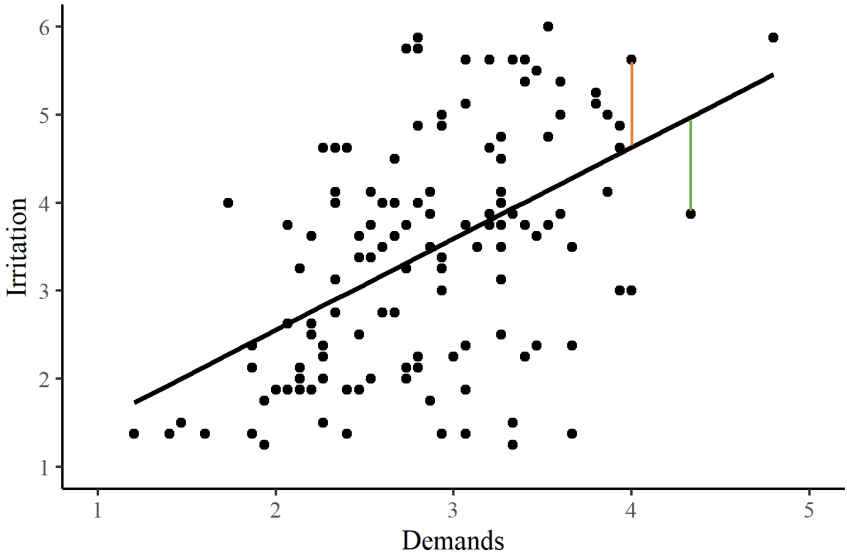
The direct relationship between StaffCare at t1 and the demonstration of resilience at t3 was not significant either without controlling for concurrent StaffCare (B = 0.15, SE = 0.45, p = .74) or with controlling for concurrent StaffCare at t3 (B = 0.56, SE = 0.69, p = .41). Therefore, we rejected hypothesis 1.

The indirect relationship between StaffCare at t1 via the psychosocial safety climate at t2 and the demonstration of resilience at t3 was significant, both without (B = 2.02, SE = 0.79, 95% CI = [0.48, 3.59]) and with controlling for StaffCare at t3 (B = 2.06, SE = 0.85, 95% CI = [0.42, 3.74]). Thus, the data supported hypothesis 2.

The indirect relationship between StaffCare via PsyCap at t2 and the demonstration of resilience at t3 was also significant, both without (B = 0.24, SE = 0.11, 95% CI = [0.04, 0.47]) and with controlling for StaffCare at t3 (B = 0.24, SE = 0.11, 95% CI = [0.04, 0.49]). Thus, the data supported hypothesis 3. All results of the regression models are presented in Table 7.[6]

[6] Without including span of control as a control variable, the results for the psychosocial safety climate as a mediator are not significant. The results for PsyCap as a mediator show the same pattern without this control variable.

Figure 6 *Fixed-Slope Regression of Job Demands with Irritation (Study II)*



Note. The figure demonstrates the reasoning behind the residual approach to measure resilience. It shows that for irritation as outcome of job demands a positive residual indicates low resilience (orange) while a negative residual indicates high resilience (green).

Table 6 *Means, Standard Deviations, and Correlations (Study II)*

Variable	*M*	*SD*	*ICC*	1	2	3	4	5	6	7
1. Span of control	57.98	40.73								
2. StaffCare t1	2.95	0.99	.28	-.24***						
3. StaffCare t3	3.06	1.00	.15	-.12	.60***					
4. Psychosocial safety climate t2	3.09	0.98	.25	-.11***	.71***	.54***				
5. PsyCap t2	4.29	0.82	.07	.09**	.26***	.27**	.28***			
6. Demands t3	2.85	0.64	.15	-.14	-.17	-.41***	-.20*	-.31**		
7. Irritation t3	3.38	1.34	.11	-.12	-.12	-.20*	-.17	-.40***	.50***	
8. Demonstration of resilience	0.00	3.48	.08	.07	.01	-.03	.08	.26**	.03	-.84***

Note. M and *SD* are used to represent mean and standard deviation, respectively. *ICC* is used to represent the intraclass-correlations. Values in square brackets indicate the 95% confidence interval for each correlation. $N_{individuals}$ = 103-1,303, $N_{schools}$ = 51-203. PsyCap = psychological capital. Demonstration of resilience computed as the inverted residuals of the regression between demands and irritation and weighted with amount of demands. *** $p < .001$, ** $p < .01$, * $p < .05$.

Table 7 *Results of Mediation Analysis with Control Variable (Study II)*

	Demonstration of resilience = Inverted residuals of regression demands – irritation t3			
	Model 1 *B (SE)*	Model 2 *B (SE)*	Model 3 *B (SE)*	Model 4 *B (SE)*
Direct effects				
Span of control	0.01 (0.01)	0.01(0.01)	0.003(0.01)	0.002(0.01)
Health-oriented leadership t1	0.15(0.45)	0.56(0.69)	-2.42(0.93)**	-2.22(1.17) †
Health-oriented leadership t3		-0.52 (0.68)		-0.29(0.79)
a-path health-oriented leadership t1 – psychosocial safety climate t2			0.82(0.04)***	0.83(0.04)***
a-path health-oriented leadership t1 – PsyCap t2			0.23(0.04)***	0.23(0.04)***
b-path psychosocial safety climate t2			2.47(0.96)*	2.50(1.02)*
b-path PsyCap t2			1.05 (0.44)*	1.06 (0.45)*
Indirect effects				
Health-oriented leadership t1 via psychosocial safety climate t2			2.02(0.79)* [0.48;3.59]	2.06(0.85)* [0.42;3.74]
Health-oriented leadership t1 via PsyCap t2			0.24(0.11)* [0.04;0.47]	0.24(0.11)* [0.04;0.49]
Total effect			-0.16(0.64)	0.08(0.79)
Total indirect effect			2.26(0.32)***	2.31(0.86)**
R^2	.01(.01)	.02(.04)	0.15(0.09) †	0.16(0.09) †

Note. Values in square brackets indicate the 95% Monte Carlo confidence interval for each indirect effect. Model 1 and 3 without control for health-oriented leadership during the pandemic, Model 2 and 4 with control for health-oriented leadership during the pandemic. † p < .01, * *p* < .05, ** *p* < .01, *** *p* < .001.

Discussion

The research question of this study was whether StaffCare during pre-pandemic times has a long-lasting positive effect on the demonstration of resilience during the pandemic and whether the psychosocial safety climate and PsyCap mediate this relationship. We could not observe a direct relationship between StaffCare and the demonstration of resilience. However, StaffCare was shown to have a positive indirect relationship with the demonstration of resilience via the psychosocial safety climate and PsyCap.

Theoretical Contributions

The operationalization of the demonstration of resilience as a residual of a regression of stressors with mental health has been proposed and applied in multiple studies in the field of clinical psychology (Schueler et al., 2020; Veer et al., 2021). With this study, we showed that this approach is also applicable to resilience in the workplace. Other than the classical questionnaires of resilience that measure how respondents would react when faced with a high stressor load, the residual approach allowed us to measure how well employees adapt to stressors. We could thereby respond to the call by Britt et al. (2016) to think about new and better ways to measure resilience in the workplace. The perspective of the individual affected by the stressors and various resources contributing to the possibility to demonstrate resilience is crucial since it implies that we do not need "the extraordinary resilient employee" but rather circumstances that allow all employees to thrive (Conley et al., 2016).

Health-Oriented Leadership as a Predictor of the Demonstration of Resilience.

Following the integrative model of employee resilience (Britt et al., 2016), we hypothesized that StaffCare, as a positive form of leadership, should be a resource that helps employees to stay mentally healthy during the pandemic despite a high stressor load. However, we could

not support this assumption with the direct effect. This contradicts earlier findings on the long-term effect of StaffCare on work ability (Pundt & Felfe, 2017). However, the specific context of the crisis might have reduced the strength of the relationship between pre-pandemic leadership (and concurrent leadership at t3) and the demonstration of resilience. The bivariate correlations showed that StaffCare at t1 did not show a positive relationship either with demands or with irritation or the demonstration of resilience at t3. With the non-significant regression analysis of the direct effect, this implies that past health-oriented cognitions of the leader did not directly transfer to the teachers' experiences during the crisis. An assumption as to why this occurred is that the change in the teachers' work environment due to the crisis was so immense (cf. Allen et al., 2020; Baker et al., 2021) that if a school principal assigned a high value and awareness to the topic of health in the past, this did not directly translate into lower demands or strain during the crisis. For example, new pedagogical practices had to be developed for efficient remote learning, while facing technological barriers (Baker et al., 2021; Trust & Whalen, 2020) and making remote teaching accessible for students from disadvantaged families became additional stressors, leading to role stress (Kraft et al., 2020). Moreover, managing lessons during the stepwise reopening of schools (Harris & Jones, 2020) and prioritizing curriculum goals (Reimers & Schleicher, 2020) increased the workload and responsibilities of teachers. Although past leadership cognitions did not exert an influence on stressors and strain during the pandemic, the concurrent bivariate correlations between StaffCare at t3 and job demands and irritation did show significant negative correlations. Thus, teachers who perceived that their leaders cared more for their health during the crisis also reported lower demands and strain. Although this did not translate into the relationship between StaffCare and the demonstration of resilience, it underlines the importance of StaffCare during a crisis. An implication for the resilience model of Britt et al. (2016), therefore, is that not all unit-level resources seem to have a direct longitudinal relationship with the

demonstration of resilience. This is one aspect that needs further research to refine the theoretical model.

Another possible reason for the non-significant direct relationship between StaffCare and a demonstration of resilience is that earlier empirical results on leadership and crisis focused on the leadership behavior or attitudes in the situation of a crisis. Conceptual papers stated the importance of learning from (Boin et al., 2013) and preparing for a crisis, even before indications that a crisis was possible (Stern, 2013). However, empirical papers have only been published sporadically on this topic (e.g., Gilstrap et al., 2016). This study showed that the long-term effects of positive forms of leadership and short-term leadership behavior in a crisis might be two different processes.

The Mediating Role of the Psychosocial Safety Climate. As Inceoglu et al. (2018) pointed out, climate constructs have been largely ignored as mechanisms of the leadership process. The results of this study now showed that the psychosocial safety climate plays a crucial role in translating pre-pandemic leadership cognitions into resilience during the pandemic. This is in accordance with the findings of Gurt and Elke (2009), who found that health culture mediates the relationship between healthy leadership and irritation. Thus, for the HoL model (Franke et al., 2014), the strong relationship between StaffCare and the psychosocial safety climate implies that leaders who attach high value and awareness to the topic of health shape the climate in their work environment. To further integrate climate as a mechanism in the StaffCare model, it would be interesting to investigate the relationship between climate constructs and self-care (cf. Franke et al., 2014).

Pertaining to the integrative resilience model that Britt et al. (2016) put forward, the results of this study imply that the category of unit resources as aspects of an individuals' resilience capacity needs further refinement. First, leadership and climate should be added to the list of unit resources. In addition to this study showing their importance for the demonstration of resilience, earlier research has already pointed out

the relevance of leadership and climate for the mental health and well-being of employees (e.g., Dollard & Bakker, 2010; Kuoppala et al., 2008). Second, within the category of unit resources, processes that ultimately contribute to the demonstration of resilience seem to take place. With this study, we showed that leaders shape the climate in their unit, which further supports the results of other studies showing, for example, that inclusive leadership positively relates to psychological safety, which then negatively relates to psychological distress during the COVID-19 pandemic (Ahmed et al., 2020). Therefore, in general, leadership as an antecedent of climate, which together contribute to employee resilience, received some empirical support and, therefore, should be considered in further theoretical and empirical work.

The Mediating Role of Positive Psychological Capital. This study presented empirical evidence that StaffCare in stable times exerts its influence on the demonstration of resilience via PsyCap as a mediator. We identified PsyCap as a driver of the effect of leadership on employees' maintained mental health despite stressor exposure and, thus, responded to the request of Fischer et al. (2017) to explore these mechanisms. We, thus, support the theoretical idea that leadership as a unit resource in the resilience model of Britt et al. (2016) contributes to personal resources as a further aspect of resilience capacity. Theoretically, this implies that different aspects of resilience capacity also relate to each other and can form a process that influences the demonstration of resilience. Since this is in line with the study findings of M. Arnold and Rigotti (2021) and earlier findings on the relationship between other leadership concepts and PsyCap (e.g., Avey, 2014; Gooty et al., 2009), we are confident in suggesting that leadership as a resource in the work environment fosters personal resources in followers, which, in turn, enable them to show resilience in the face of adversity. Although the R^2 values were rather low, they are comparable to the R^2 values in the original paper on HoL of Franke et al. (2014), which varied between 9 and 14% of the explained variance via transformational leadership and StaffCare in multiple outcomes (state of health, irritation, health

complaints, and work–family conflicts). Moreover, and notably, we aimed to predict an individual outcome using predictors with a rather large time lag, where the R^2 values were typically lower than when studying macro-level outcomes.

Limitations and Future Research

Although this study had several strengths, such as its longitudinal design and the operationalization of resilience in the workplace, some limitations need to be discussed. First, we could only use self-reported data. This is associated with the problem of common method variance (Podsakoff et al., 2003). For example, adding the leaders' self-assessment of their StaffCare as a predictor would have been preferable. However, the small sample size on the between level of t3 did not allow for such analyses. The timely separation of predictor, mediator, and outcome, however, helped to reduce the common method variance.

Second, the generalizability of the study results is limited. One reason for this is that we employed this specific sample of employees. This choice was made based on the immediate and strong impact of the COVID-19 pandemic and the measures of social distancing for the work of teachers (Allen et al., 2020; Baker et al., 2021). However, this reduced the generalizability of the results to other occupations. One such aspect differing between school as a work environment and other organizations is the rather large span of control of one school principal to the number of teachers within a school (here, a mean of 58 teachers per principal). Although we did control for this variable in the analysis, the considerably higher span of control in comparison to other occupations might have weakened the expected results. Another reason for the restricted generalizability is the specificity of the crisis that provided the context of this research. However, since pandemic situations with respiratory symptoms have occurred before (e.g., Ebola in 2014 or an earlier SARS virus outbreak in 2003), and the probability of future pandemics of this type is high (IPBES, 2020), the current results

are generalizable for future pandemics. It could be interesting to conduct a similar study in the context of other crises with a strong influence on organizations, such as a financial or political crisis, as well as in other occupational groups.

Third, we measured job demands and strain as indicators for the demonstration of resilience at only one point during the crisis. This could only provide a limited overview of the experience of teachers during the pandemic. Future research on other crises could measure job demands and strain during the on-going crisis at multiple measurement occasions. This would allow for analyzing the development of the demonstration of resilience and predictors thereof.

Practical Implications

Since teachers play an important societal role in general (Mason, 2000), as first responders, and in the long-term response to a crisis (O'Toole & Friesen, 2016), it is crucial to understand what helps them to show resilience during this pandemic. One important aspect that the results of this study showed is that leaders who show StaffCare toward their employees during stable times indirectly and positively influence their adaptation to a highly disruptive crisis, such as what the COVID-19 pandemic poses. This long-term effect, in addition to the immediate or midterm positive effects found in earlier research (M. Arnold & Rigotti, 2021; Köppe et al., 2018), highlights the need for leaders to show StaffCare. Franke et al. (2015) already pointed out the possibilities of developing interventions for leaders to enhance their StaffCare. Further, Schulte et al. (2018) developed and evaluated such a training program for leaders. With a pre–post design, the authors showed that a 3-day training program including health-oriented self-leadership and employee-directed HoL significantly improved the leader-rated quality of relationships with their employees directly after the training and at a 3-month follow-up (Schulte et al., 2018).

Moreover, the study results underline the role of the psychosocial safety climate as a mechanism in the relationship between StaffCare and

the demonstration of resilience. Based on the four aspects of the psychosocial safety climate (i.e., the commitment of management, the priorities of management, communication within the organization, and the participation of employees), one can target the development of the climate within an organization. Dollard and Bailey (2019) proposed measuring the level of the psychosocial safety climate and defining critical areas based on benchmark values. Afterward, a process of developing measures to enhance these critical areas within each working group should begin.

Finally, our results show the importance of PsyCap as a mechanism of the long-lasting effects of StaffCare on the demonstration of resilience. Based on the four aspects of PsyCap, one can target the development of PsyCap in employees or teachers more specifically. Luthans et al. (2006) proposed a 1-hour micro intervention targeting the four building blocks of PsyCap and reported positive effects, both in a sample of students and in a sample of practicing managers. Notably, the effect on overall PsyCap was larger than that on the sub-facets, further supporting the idea that PsyCap is more than the sum of its aspects (Luthans et al., 2006).

Conclusions

Our longitudinal study employed a new approach to measure resilience in the workplace. The demonstration of resilience was operationalized as the residual of the regression of job demands with mental strain. The positive indirect effects of StaffCare via the psychosocial safety climate and PsyCap on employee resilience highlighted the strengths of the HoL concept. Even over a long period of 1.5 years, and with the context changing from pre-pandemic times to working during the COVID-19 pandemic, StaffCare helps employees to stay mentally healthy despite the experience of high job stressors. The study allowed us to suggest practical implications such as a training of HoL and workshops to enhance the psychosocial safety climate and PsyCap are adequate measures to prepare for future crises.

Antecedents of Health-oriented Leadership

Abstract

Health-oriented leadership (HoL) incorporates a leader's health behaviors and attitudes toward both their followers (StaffCare) and themselves (SelfCare), and abundant evidence points to its positive effects on employee health and well-being. However, little is known about the antecedents of HoL. Therefore, in the present study, we take a leader-centric perspective and propose a serial mediation model indirectly linking leaders' job resources and job demands with StaffCare, mediated by leaders' SelfCare, work engagement, and their levels of emotional exhaustion. Over 5 workweeks, 234 school principals and vice-principals responded to a weekly questionnaire, resulting in 956 total responses. By employing the multilevel structural equation modelling framework, we show that SelfCare is a mechanism in the motivational and health-impairment process for leaders. Moreover, the proposed serial mediation of the relationship between job resources and StaffCare by leader SelfCare and work engagement was supported by the data. Such a serial mediation could not be found for job demands. These results suggest that work characteristics and the leader's well-being play a role in shaping leadership cognition and behavior. Regarding theoretical implications, we propose an integration of the HoL model into the job demands–resources model for leaders.

Keywords: Health-oriented leadership; job demands–resources model; emotional exhaustion; work engagement; multilevel serial mediation analysis

Introduction

Over the past decade, leadership researchers have found empirical evidence indicating that certain leadership behaviors and attitudes positively influence followers' health and well-being, whereas others have detrimental effects (Montano et al., 2017; Skakon et al., 2010). Considering the pivotal role leaders play in employees' well-being, it is astonishing that so few studies have investigated contextual or situational antecedents of health-oriented leadership. So far, researchers have focused on leaders' characteristics, such as their personality traits (Frazier & Jacezko, 2021; Zaccaro et al., 2018), motives and values, cognitive capacities, and social skills (Zaccaro et al., 2018), as potential antecedents of leadership. Although situational characteristics have been discussed in theoretical work (Zaccaro et al., 2018), they have rarely been considered in empirical studies (exceptions include Dóci et al., 2020; Turgut et al., 2020). Moreover, scholars have called for studies on leaders' mental health and its relationship to leadership (Barling & Cloutier, 2017). Therefore, our research question is as follows: what are the situational antecedents and well-being antecedents at the leader level that are relevant for showing healthy leadership?

Several concepts related to health-oriented and health-promoting leadership have been proposed (Eberz & Antoni, 2016; Franke et al., 2014; Jiménez, Bregenzer, et al., 2017; Vincent, 2012). We focus on health-oriented leadership (HoL; Franke et al., 2014) because this concept explicitly integrates self-directed, health-related attitudes and behaviors (SelfCare) as well as the health-related leadership shown towards employees (StaffCare). According to the HoL model, leader SelfCare is positively related to StaffCare because being aware of and valuing one's own well-being makes an individual more likely to care about others' well-being (Franke et al., 2014). Both SelfCare and StaffCare include the cognitive aspects of valuing health and health awareness as well as the behavioral components of actual health-

enhancing behavior during work and leisure time (Franke et al., 2014). The idea that StaffCare enhances employee well-being and health has received consistent empirical support (M. Arnold & Rigotti, 2021; Franke et al., 2014; Kaluza, Schuh, et al., 2020). Despite the call by Franke et al. (2015) to further investigate which aspects of the work environment are drivers of HoL, whether leaders' job characteristics influence their ideas about SelfCare and StaffCare remains unclear, as does the role leaders' own well-being plays in this relationship.

Because leadership is a dynamic concept (Michel & LeBreton, 2011; Mohr & Wolfram, 2010), and in order to properly test a serial mediation model, we opted to utilize multiple measurement waves, and we focused on analyzing within-person effects. In practice, within-person studies are more informative than between-person studies for developing topics for leadership training (Dóci et al., 2020). We employed a sample of school principals as leaders in order to answer the research question for two reasons. First, this reduced variability in leadership tasks and roles, thus allowing us to study the hypothesized relationships in a controlled context. Second, although much research has investigated the health of teachers and its antecedents, that of school principals has been largely neglected (Dadaczynski et al., 2019). However, findings on trickle-down effects from leaders to followers (e.g., Kaluza, Schuh, et al., 2020) suggest that, for fostering teacher well-being, fostering principal well-being is a valuable starting point.

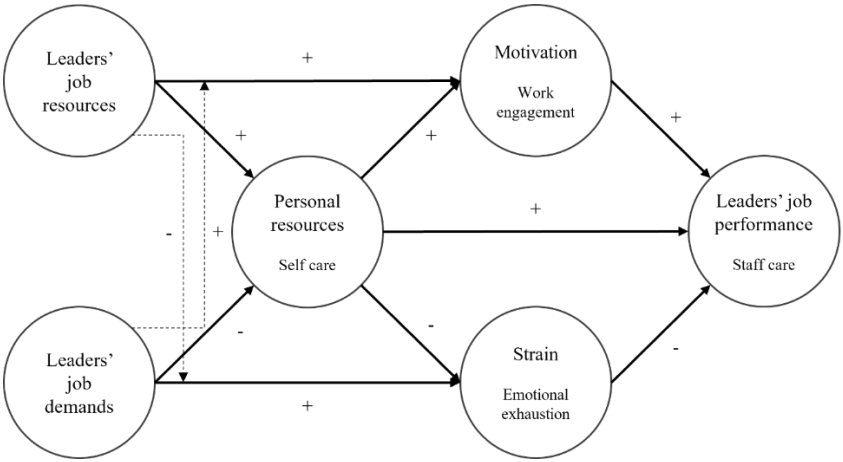
Overall, in this study, we aim to integrate the HoL model (Franke et al., 2014) into the job demands–resources (JD–R) model (Bakker et al., 2005; Bakker & Demerouti, 2017), and we consider leaders' job characteristics, SelfCare, and well-being to be antecedents of leadership (Figure 7). We aim to provide the following contributions. First, we respond to Bakker and Demerouti's (2017) call to study the mechanisms underlying the relationship between job characteristics and well-being, and we assert that SelfCare mediates this relationship. SelfCare can be categorized as a personal resource, and various positions of personal

resources within the JD–R model have been proposed (Bakker & Demerouti, 2017). We empirically test the mediating role of SelfCare in the motivational and health-impairment process through a weekly survey design. This survey design and the method of controlling for the previous time point of mediators and outcomes helps to establish the order in which the process from job characteristics to StaffCare takes place.

Additionally, we argue that leadership is an aspect of leaders' performance and that it is thus a distal outcome within the JD–R model. So far, leadership has only been integrated into the JD–R model as a potential resource from the perspective of followers (e.g., Breevaart & Bakker, 2018; Krick et al., 2021) or as a specific predictor of job demands and resources experienced by employees (e.g., Schaufeli, 2015). By integrating the HoL model's concepts of SelfCare and StaffCare (Franke et al., 2014) into the JD–R model, we considerably further understanding of the processes that foster or hinder certain behaviors and attitudes of leaders toward their employees.

Finally, enlarging our understanding of the antecedents of StaffCare is of high practical value. In this study, we simultaneously study both environmental (job demands and resources) and individual (SelfCare, work engagement, emotional exhaustion) characteristics that could influence leaders' StaffCare. This leads to multiple approaches that could be used to help leaders demonstrate StaffCare. Understanding how changes in leaders' working conditions contribute to their SelfCare and affect their leadership is essential for enhancing healthy leadership; doing so is good for employees, for leaders themselves, and for organizations in general.

Figure 7 *Integration of the Model of Health-Oriented Leadership with the Job Demands–Resources Model (Study III)*



Note. Application of the JD–R model to the leader level and integration of the HoL model. Solid lines have been tested in this study; dashed lines have not been tested but are proposed based on the JD–R model.

Job Characteristics and Well-Being of Leaders within the JD–R Model

The basic tenet of the JD–R model is that job characteristics can be differentiated into job resources and job demands (proposition 1; Bakker & Demerouti, 2017). Theories and research on the JD–R model have shown that there is a motivational process by which job resources are positively related to motivation, and there is a health-impairment process by which job demands are positively related to strain (proposition 2; Bakker & Demerouti, 2017; Lesener et al., 2019). Although research has shown that leadership is an important variable within the JD–R model (cf. Bakker & Demerouti, 2017), working conditions and health outcomes specific to leadership roles remain

understudied (Bakker & Xanthopoulou, 2013; Knudsen et al., 2009). Because research on leaders' working conditions has shown that they experience especially high job demands (Hambrick et al., 2005; K. J. Lovelace et al., 2007), we posit that it is important to study leaders themselves. This is further supported by N. Wirtz (2018), who argued that the intermediate position of leaders between an organization's workforce and management constitutes a risk factor for their health.

As Knudsen et al. (2009) stated, there is no existing consensus on how job resources and demands for leaders should be conceptualized because studies often employ samples of employees in general, without specifically considering their roles as leaders (exceptions include Knudsen et al., 2009; Mohr & Wolfram, 2010; Zimber et al., 2015). In the present study, it was important to ensure that the job resources and demands investigated varied weekly and applied to school principals' roles as leaders. Under this premise, we chose delegation, autonomy, and social support as job resources. A meta-analysis by Zimber et al. (2015) showed that social support and autonomy were two relevant resources for leaders. Warwas (2012) investigated autonomy in school principals as leaders and also identified delegation as an important resource for leaders (cf. Leana, 1986). In this context, "autonomy" is defined as the freedom to make decisions, complete work according to one's own schedule, and choose appropriate methods for doing so (Morgeson & Humphrey, 2006). "Delegation" is defined as the ability to assign specific tasks to employees to relieve pressure on the leader; thus, it is considered a resource (Warwas, 2012).

The three job demands we study are interruptions, problems with teachers, and role conflicts. Warwas (2012) showed that interruptions (by structural obstacles) and problems with teachers (i.e., interpersonal conflicts between teachers) are the two main demands school principals experience, and Zimber et al. (2015) showed in their meta-analysis that role stressors are frequently studied demands of leaders. In this study, we also investigated role conflict, meaning "the extent to which one

experiences incompatible work demands" (Bowling et al., 2017, p. 3). In accordance with most studies on the JD–R, we chose work engagement (Schaufeli et al., 2002) and emotional exhaustion (Demerouti et al., 2001; Lesener et al., 2019) as indicators of motivation and strain. "Work engagement" refers to "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74), and "emotional exhaustion" refers to "feelings of being overextended and exhausted by […] one's work" (Demerouti et al., 2001b, p. 499).

The basic tenet that job demands enhance emotional exhaustion while resources enhance work engagement is likely valid for leaders as well as for employees. Several studies have shown that job demands, such as workload, role conflicts (Zimber et al., 2015), highly dynamic tasks (Mohr & Wolfram, 2010), performance demands, and centralization (Knudsen et al., 2009), elicit strain in leaders. By contrast, resources such as social support, autonomy (Zimber et al., 2015), long-term strategic planning (Knudsen et al., 2009), and decision latitude (Dadaczynski et al., 2019) are protective factors. However, it is unclear which personal resources of leaders act as mediators in these relationships.

Job Characteristics, Health-Oriented Self-Leadership, and Well-Being

We explain our research model by first proposing that SelfCare is a mediator of the relationship between working conditions and leaders' well-being. Within the HoL model, "SelfCare" is defined as health-specific attitudes and behaviors toward oneself (Franke et al., 2014). The SelfCare of leaders and followers consists of their health-related behavior, the value they attribute to health, and their health awareness. Franke et al. (2014) defined health behavior as personal activity relevant to one's health. The value attributed to health describes the attitude that one's health is important, and health awareness refers to the cognitive attention paid to one's health and the strain elicited by the workplace and other work-related conditions.

Health-specific SelfCare in the context of work (Franke et al., 2014) can be integrated into the JD–R model as a personal resource. Personal resources can be defined as "beliefs people hold regarding how much control they have over their environment" (Bakker & Demerouti, 2017, p. 275). Because SelfCare incorporates awareness of one's health, the importance one attributes to their health, and the concrete behaviors one engages in to preserve their health (Franke et al., 2014), it also conveys the notion that people with high SelfCare believe that they can steer their cognition and behavior toward health promotion at work. This aligns with the theoretical assumptions of the HoL model, in which SelfCare is seen as a prerequisite for workplace health and well-being. Empirical studies have shown that SelfCare is negatively related to burnout (Horstmann, 2018) and positively related to well-being (Santa Maria et al., 2019). Therefore, we treat SelfCare as a personal resource in our study.

Different roles of personal resources within the JD–R model have been proposed (cf. Bakker et al., 2014; Bakker & Demerouti, 2014). Personal resources have been characterized as substitutes for job resources for enhancing work engagement, as mediators between job characteristics and well-being, as moderators buffering negative effects of job demands on well-being, and as moderators increasing the positive effects of challenge demands (Bakker & Demerouti, 2017). Based on the notion of gain cycles within the conservation of resources (COR) theory (Halbesleben et al., 2014), we argue that high levels of job resources should facilitate the SelfCare of leaders as a personal resource. Conversely, we hypothesize that high job demands should reduce SelfCare. As Hobfoll (2011) stated in his work on COR theory, people invest resources to protect against resource loss or to gain resources. Applying this idea to the leadership role, we assert that leaders invest personal resources to cope with high work demands, which reduces their well-being. Accordingly, the most empirically studied role of personal resources in the relationship between job resources and well-being is as a mediator (e.g., Bakker & Xanthopoulou, 2013;

Xanthopoulou et al., 2007; Zhang et al., 2020). When considering job demands as a predictor of the health-impairment path, the role of personal resources is less clear, though recent studies provide evidence for the mediating role of personal resources in the relationship between job demands and well-being outcomes (e.g., Han et al., 2020; Huang et al., 2016; Kim & Beehr, 2018).

Taken together, empirical results and theoretical arguments strongly support the assumption that personal resources mediate the relationship between job characteristics and well-being. However, literature on the role of personal resources within the JD–R model has thus far mainly focused on job characteristics and the well-being of employees in general without specifically considering leadership roles. The specific job characteristics of leaders and the personal resources relevant for them remain understudied. Moreover, SelfCare as a personal resource has yet to be tested as a mediator within the JD–R model. In the present study, we propose that SelfCare as a health-specific personal resource plays an important role in the health-impairment and motivational processes of the JD–R model:

Hypothesis 1: Through SelfCare, leaders' job resources have a positive indirect relationship with their work engagement.

Hypothesis 2: Through SelfCare, leaders' job demands have a positive indirect relationship with their emotional exhaustion.

Health-Oriented Staff Leadership as an Outcome of the Health-Impairment Path and the Motivational Path

To further study the integration of the HoL model within the JD–R model at the leader level, we propose health-oriented staff leadership as a distal outcome of the health-impairment path and the motivational path. We have already presented the notion of SelfCare as defined within the HoL approach (Franke et al., 2014), and leaders' health-specific attitudes and behaviors toward their followers are integrated in the model as StaffCare. StaffCare also consists of three factors: health

awareness (a leader's evaluation of followers' stress levels), the value the leader attributes to followers' health, and health behavior (whether a leader provides healthy working conditions and stimulates healthy behaviors; Franke et al., 2014).

The authors of the JD–R model posited that job performance is determined by individuals' levels of motivation and job strain (proposition 6; Bakker & Demerouti, 2017). Motivation is thought to enhance job performance, and strain is thought to reduce performance (Bakker & Demerouti, 2017). Therefore, job performance constitutes a distal outcome of the health impairment and motivational processes. Bakker and Demerouti (2017) provided an overview of studies on this relationship. "Performance" can be defined as the actions and behaviors that contribute to achieving organizational goals (Campbell, 1990; Koopmans et al., 2011). This includes the notion that work performance should be understood as a behavior, rather than as a result (Koopmans et al., 2011). Moreover, what constitutes work performance varies from job to job (Koopmans et al., 2011). For leaders in general, and for school principals as a specific population, leadership is part of their work and contributes to organizational goals. An important component of leadership is providing guidance to a team of employees. In the relevant literature, scholars have identified different tasks principals must complete. These entail central leadership tasks, such as promoting change, coordinating activities, developing a learning culture, promoting human resource development, finding problem-solving strategies, and creating a sustainable team-oriented atmosphere (Semling & Zölch, 2008). As such, we conclude that "leadership […] is a complex, multi-faceted, form of performance" (Mumford, 2011, p. 1), which can be integrated into the JD–R model as a distal outcome of the motivational and health-impairment processes.

Barling and Cloutier (2017) and Kaluza, Boer, et al. (2020) summarized theoretical reasons that leaders' (mental) health and well-being may affect their leadership. One possible reason is that leaders

experiencing resource depletion due to ill health will reallocate their resources and reduce engagement in favorable leadership behaviors (Barling & Cloutier, 2017). By contrast, based on COR theory, researchers have argued that leader well-being acts as a resource that facilitates positive leadership (Kaluza, Boer, et al., 2020).

Empirical evidence further supports the idea that leadership is affected by job characteristics and leaders' well-being. Horstmann and Remdisch (2019) interviewed leaders in the healthcare sector to explore situational antecedents of StaffCare, and their qualitative results showed that support by management was an important resource for valuing health, and frequent interpersonal interaction with followers increased leaders' health awareness. Predictors of health behavior were financial, personnel, and time resources (Horstmann & Remdisch, 2019). Regarding job demands in relation to other leadership behaviors, researchers have demonstrated that excessive job goals (Sharma, 2018) and time pressure (Dóci et al., 2020) are antecedents of leadership. Regarding the relationship between exhaustion and leadership, sleep deprivation (Barnes et al., 2016; Olsen et al., 2016; M. S. Price & Weiss, 2000), depressive symptoms (Byrne et al., 2014; Tepper et al., 2006), and distress (Li et al., 2016) have been shown to significantly relate to different concepts of leadership. The meta-analysis conducted by Kaluza, Boer, et al. (2020) further supports this; the researchers found a positive correlation between leaders' well-being and constructive leadership (accounting for 86% of variance).

Empirical evidence also supports the idea that strain might mediate the relationship between job demands and leadership. Mawritz et al. (2014) showed that unrealistically difficult job goals for leaders were indirectly related to abusive supervisory practices through leaders' anxiety and anger. Moreover, Güntner et al. (2021) found that follower resistance was indirectly and positively related to destructive leader behavior through leaders' negative affect. In addition, Qian et al. (2020)

showed that leaders' job insecurity was negatively related to transformational leadership through leaders' emotional exhaustion.

We build on these findings by assuming that job demands positively relate to strain and that strain, in turn, lower leaders' StaffCare. Furthermore, we go beyond these findings by systematically applying the assumptions of the JD–R model; we thus hypothesize that job resources contribute to StaffCare, and that this relationship is mediated by leaders' work engagement.

Hypothesis 3: Through their work engagement, leaders' job resources have a positive indirect relationship with their StaffCare.

Hypothesis 4: Through emotional exhaustion, leaders' job demands have a negative indirect relationship with their StaffCare.

We assert that the HoL model, integrated with the JD–R model, is a process model. Job resources and demands influence personal resources, which in turn relate to motivation and strain, which ultimately affect job performance (Bakker & Demerouti, 2017). Applying this model to leadership, and integrating the idea that SelfCare acts as a mediator between job characteristics and well-being, the following hypotheses on serial mediation follow:

Hypothesis 5: Leaders' job resources have a positive indirect relationship with their StaffCare; this relationship is serially mediated by SelfCare and work engagement.

Hypothesis 6: Leaders' job demands have a negative indirect relationship with their StaffCare; this relationship is serially mediated by SelfCare and emotional exhaustion.

Methods

Procedure and Sample

Data were collected from a larger study with multiple sub-studies on leadership and health in German schools. Principals were contacted

by email and asked to take part in a study on mental health and resilience. Those who responded with interest were then contacted by phone, and the researcher explained the study's goals and methods. Overall, 260 principals agreed to participate in the overarching study with the teachers at their schools. From these 260 schools, *N* = 234 leaders answered a weekly questionnaire which is relevant to the sub-study at hand (response rate 90%). Over 5 weeks in January and February 2019, participants answered a short online questionnaire on Fridays concerning their experiences during the last workweek. The mean number of weeks of participation was 4.09, resulting in 956 observations.

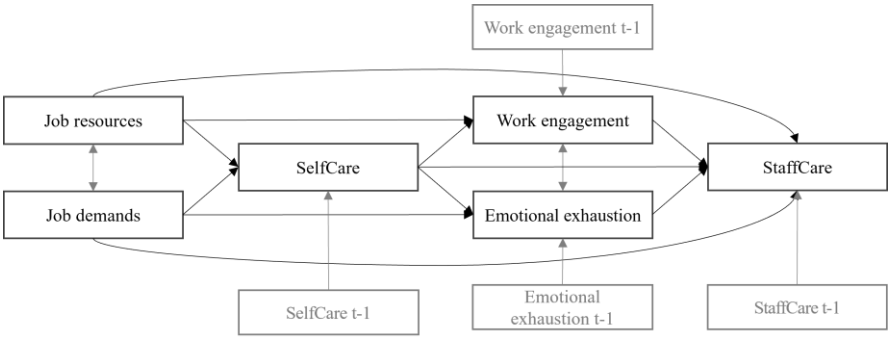
Concerning the leadership role of the participants of the weekly questionnaire, 216 participants were principals, 15 were vice-principals, and three participants we could not categorize definitively as either vice-principal or principals. More than half of the participants were female (66%), and the mean age was 52.45 years (*SD* = 7.19). Principals from 12 of Germany's 16 federal states took part. They worked at all school types within the German school system: primary schools (33%), junior high schools (*Realschule*; 7%), high schools (*Gymnasium*; 9%), vocational training schools (11%), and special schools (13%). Some principals indicated that they worked at a school type different from these (9%) or did not indicate a school type (15%). On average, the principals had worked as teachers for 22.66 years (*SD* = 8.41) and had held the position of principal for 7.03 years (*SD* = 6.12).

Measures

All measurements were taken from participants in leadership positions. Unless otherwise noted, answers were given on a five-point Likert scale ranging from 1 (*low agreement*) to 5 (*high agreement*). The

model linking the different constructs investigated is depicted in Figure 8.[7]

Figure 8 *The Serial Mediation Model (Study III)*



Job Resources. We measured the job resources delegation, autonomy, and social support. The two items for delegation were developed by Warwas (2012) and van Ackeren et al. (2013). An example is "This week, I was able to delegate many tasks to capable employees." Three items for autonomy and four items for social support were used, all developed by Krause (2004). Examples include "This week, I was able to decide for myself how I would do my work" and "This week, I was able to talk openly with my colleagues about everything, including personal things." Because we were not interested in the effects of one specific job resource, but rather in the effect of multiple resources available to school principals, the three scales were combined to form one score (as

[7] A full list of all items relevant to this study can be found in the appendix, Table A.6

previously done by Hakanen et al., 2008) with overall satisfactory consistency, with a Cronbach's α of .75–.82 over the 5-week period.

Job Demands. Three scales were used to measure demands: interruptions, problems with teachers, and role conflicts. Interruptions and problems with teachers were measured using two and three items, respectively, developed by Warwas (2012). Examples include "This week, my working day was mostly very fragmented" and "This week, problems occurred with individual teachers." Three items of the role stressors scale from Bowling et al. (2017) were used to measure role conflict, including "In my job, I often feel like different people are 'pulling me in different directions'." As for job resources, the three scales used to measure job demands were combined to form one job demands score, with satisfactory internal consistency of .71–.80 over the 5-week period.

Based on the partially saturated model approach and following recommendations by Ryu and West (2009), we conducted a confirmatory factor analysis for the within level with the items job resources and job demands and report the comparative fit index (CFI) and root mean squared error of approximation (RMSEA) to assess model fit. Results show that a 1-factor model including both variables, job demands, and resources, fit the data badly (*RMSEA* = .13, *CFI* = .52), while a 2-factor model differentiating between resources and demands displayed an acceptable and significantly better fit (*RMSEA* = .08; *CFI* = .83, $\Delta\chi^2(df)$ = 1002.41(2), $p < .001$). Although a 6-factor model showed an even better fit (*RMSEA* = .02, *CFI* = .99, $\Delta\chi^2(df)$ = 733.54(13), $p < .001$) we decided to use a composite measure of the three subscales within job resources and demands to reduce complexity and answer the research question. However, results for each separate job resource and demand are presented in the appendix.

Well-Being. Well-being was operationalized through work engagement and emotional exhaustion. Items were answered on a 6-point Likert scale ranging from 1 (*never*) to 6 (*always*). For work

engagement, we used the three items from the Utrecht Work Engagement Scale devised by Schaufeli et al. (2019), including, for example, "I was bursting with energy at work." Internal consistency was .68 to .74 over the 5-week period. Three items from the Maslach Burnout Inventory (Maslach et al., 1996) were used to measure emotional exhaustion. An example is "I felt burnt out by my work." Internal consistency for emotional exhaustion was .75 to .84.

A partially saturated confirmatory factor analysis on the within level revealed that a 2-factor model (*RMSEA* = .04, *CFI* = .99, $\Delta\chi^2(df)$ = 49.56(1), $p < .001$) fit the data better than a 1-factor model (*RMSEA* = .08, *CFI* = .94).

Health-Oriented Leadership. To measure HoL, we used an instrument devised by Pundt and Felfe (2017). Of the 19 original items developed for measuring SelfCare, we chose 12 for this study. Because we took weekly measurements, it was important to use a small number of items to ensure principals' continuous participation. Items were chosen based on their appropriateness for weekly measurement and the factor loadings from earlier studies. Item examples are "I realized in time when I needed a break" (awareness), "My health was my first priority" (value), and "I made sure that I could find enough relaxation and recreation" (behavior). The overall scale's internal consistency was .82 to .84 over the 5-week period. Of the 22 original items developed for the StaffCare parameter, we chose 11 for use in this study. This decision was based on whether the content of the item was appropriate for weekly measurement and factor loadings. Example items are "I immediately noticed when something was wrong with my employees' health" (awareness), "The health of my employees was very important to me this week" (value), and "When my employees seemed stressed, I approached them and tried to find solutions" (behavior). The overall scale's internal consistency was .80 to .85 over the 5-week period.

As before, we conducted a partially saturated confirmatory factor analysis for the within level (Ryu & West, 2009), which showed that a 1-

factor model does not fit the data well (*RMSEA* = .07, *CFI* = .76). A 2-factor model differentiating between SelfCare and StaffCare fit the data better (*RMSEA* = .05, *CFI* = .88, $\Delta\chi^2(df)$ = 73.99(1), $p < .001$). Although a 6-factor model differentiating between the three subscales of SelfCare and StaffCare (awareness, value, behavior) fit the data even better than the 2-factor model (*RMSEA* = .03, *CFI* = .96, $\Delta\chi^2(df)$ = 439.70(27), $p < .001$), we nonetheless decided to use the SelfCare and StaffCare global scales in order to reduce complexity in the research model.

Analyses

We conducted a multilevel analysis using MPlus software (Muthén & Muthén, 1998–2017). We first analyzed the null models to calculate intraclass correlations (ICCs) for all variables, then built the multilevel serial mediation model following recommendations by Preacher et al. (2010) within the multilevel structural equation modelling framework. A random-intercept fixed-slope model was used to test the hypotheses because random slopes can reduce the likelihood of convergence and create unnecessary complications (Gieter et al., 2018; Preacher et al., 2010). To address the research questions, we focused on within-level analysis. In this case, we prioritized investigating how within-level changes to the predictors elicited changes in the outcomes over investigating how differences among participants related to the outcomes. Most studies on personal resources as a mediator and on leadership have utilized cross-sectional or longitudinal designs to examine between-person differences. However, in our case, we focused on how within-person changes in job characteristics related to leaders' levels of SelfCare, well-being, and StaffCare. This allowed us to control for the previous week's mediator and outcome values in order to more rigorously test the causal order of the serial mediation, as per Hu et al. (2020) and Kronenwett and Rigotti (2020). Standard errors and confidence intervals for indirect effects were computed with the R package RMediation using the Monte Carlo approach (Tofighi & MacKinnon, 2011).

Table 8 *Means, Standard Deviations, Intraclass Correlations (ICCs), and Bivariate Correlations of Study Variables (Study III)*

	M (SD)	*ICC*	1	1.1	1.2	1.3	2	2.1	2.2	2.3	3	4	5	6
1 Job resources	3.38(0.67)	.46		.80***	.68***	.74***	-.35***	-.28***	-.05	-.43***	.43***	.49***	-.41***	.31***
1.1 Delegation	3.10(0.94)	.40	.76***		.32***	.46***	-.33***	-.26***	-.04	-.42***	.37***	.29***	-.37***	.20**
1.2 Autonomy	3.52(0.92)	.43	.74***	.29***		.20**	-.39***	-.31***	-.16*	-.39***	.32***	.44***	-.32***	.11
1.3 Support	3.51(0.85)	.53	.69***	.31***	.30***		-.05	-.05	.09	-.13*	.27***	.36***	-.21**	.38***
2 Job demands	3.04(0.77)	.56	-.30***	-.21***	-.33***	-.09**		.78***	.69***	.82***	-.40***	-.21**	.49***	.02
2.1 Interruptions	3.68(1.00)	.43	-.20***	-.18***	-.21***	-.03	.68***		.34***	.50***	-.37***	-.16*	.37***	-.01
2.2 Problems	2.67(1.01)	.46	-.06	-.04	-.10**	.02	.62***	.13***		.29***	-.12	-.04	.16*	.08
2.3 Role conflict	2.77(1.18)	.54	-.33***	-.20***	-.35***	-.17***	.71***	.25***	.13***		-.41***	-.26***	.55***	-.03
3 SelfCare	2.99(0.68)	.74	.33***	.22***	.34***	.15***	-.26***	-.17***	-.10**	-.24***		.35***	-.52***	.46***
4 WE	4.13(0.88)	.62	.32***	.20***	.32***	.18***	-.18***	-.09**	-.05	-.22***	.22***		-.59***	.35***
5 EE	2.49(1.18)	.68	-.30***	-.22***	-.28***	-.14***	.30***	.17***	.10**	.32***	-.32***	-.37***		-.22***
6 StaffCare	3.36(0.65)	.66	.33***	.20***	.24***	.29***	-.09**	-.04	.04	-.17***	.26***	.29***	-.18***	

Note. Within-level correlations below the diagonal, between-level correlations above the diagonal. WE = work engagement, EE = emotional exhaustion. N_{within} = 959, $N_{between}$ = 234. * p < .05; ** p < .01; *** p < .001

Results

Proportions of within- and between-person variance were indicated by ICCs; these were moderate for all variables (Table 8). StaffCare and SelfCare were negatively correlated with emotional exhaustion at both levels of analysis. The same held true for work engagement: StaffCare and SelfCare showed positive and significant correlations with work engagement on both the within- and the between-person levels. On both levels, resources showed a negative correlation with emotional exhaustion, a positive correlation with work engagement, and a positive correlation with both StaffCare and SelfCare. By contrast, demands were positively related to emotional exhaustion and negatively related to work engagement on the within- and between-person levels. Demands were negatively correlated to StaffCare and SelfCare on the within-person level, and on the between-person level, demands were negatively and significantly correlated with SelfCare but not significantly related to StaffCare (Table 8).

Health-Oriented SelfCare as a Mediator

Table 9 shows the results of the statistical model testing the simple mediation hypotheses with SelfCare as the mediator between job characteristics and well-being. We found a significant positive indirect effect of job resources on work engagement through SelfCare (B = 0.04, SE = 0.01, 95% CI = [0.01;0.07]). The indirect effect of job demands on emotional exhaustion through SelfCare was likewise positive and significant (B = 0.07, SE = 0.02, 95% CI = [0.04;0.11]). Therefore, the data supports H1 and H2.

Exploratory analyses of each individual job resource and job demand are presented in the appendix (Tables A.7 and A.8). The patterns of results for all three job resources and all three job demands were the same as for those of the overall construct, thus providing further support for H1 and H2.

StaffCare as an Outcome of Job Characteristics and Well-Being

Results of the statistical model testing the simple mediation hypotheses with well-being as the mediator between job characteristics and StaffCare revealed a significant positive indirect effect of job resources on StaffCare through work engagement (*B* = 0.03, *SE* = 0.01, 95% CI = [0.02;0.05]). However, the indirect effect of job demands on StaffCare through emotional exhaustion was not significant (*B* = -0.002, *SE* = 0.01, 95% CI = [–0.01;0.01]). Therefore, the data support H3, but not H4.

Further exploratory analyses of each individual job resource and job demand showed the same pattern for all three job resources; each had a significant indirect effect (Table A.4). Contrary to the findings for the overall construct of job demands, we found that the three job demands considered in isolation all had a significant negative indirect effect on StaffCare through emotional exhaustion (Table A.5).

Serial Mediation Model

Results of the serial mediation model are depicted in Table 9. In H5, we assumed that the relationship between job resources and StaffCare was serially mediated by SelfCare and work engagement. The specific indirect effect was positive and significant (*B* = 0.005, *SE* = 0.002, 95% CI = [0.001;0.01]), so H5 is supported by the data. Serial mediation of the relationship between job demands and StaffCare by SelfCare and emotional exhaustion was not significant (*B* = -0.001, *SE* = 0.002, 95% CI = [–0.004;0.003]), so we rejected H6.

Of the individual job resources examined in the exploratory analysis, for all three resources, we found a significant serial mediation on StaffCare through SelfCare and work engagement (Table A.4). Concerning the three individual job demands, the serial mediation from each demand on StaffCare through SelfCare and emotional exhaustion was negative and significant (Table A.5).

Table 9 *Results of Within-Level Serial Mediation (Study III)*

	SelfCare	WE	EE	StaffCare
	B (SE)	*B (SE)*	*B (SE)*	*B (SE)*
Direct effects				
Resources	0.19(0.03)***	0.27(0.04)***		0.18(0.04)***
Demands	-0.13(0.03)***		0.27(0.05)***	0.04(0.03)
SelfCare		0.20(0.07)**	-0.55(0.07)***	0.17(0.05)***
SelfCare t-1	0.12(0.03)**			
WE				0.12(0.03)***
WE t-1		0.16(0.04)***		
EE				-0.01(0.02)
EE t-1			0.11(0.03)**	
StaffCare t-1				0.11(0.04)**
Indirect effects				
H1: Resources → SelfCare →		0.04(0.01)** [0.01;0.07]		
H2: Demands → SelfCare →			0.07(0.02)*** [0.04;0.11]	
H3: Resources → WE →				0.03(0.01)*** [0.02;0.05]
H4: Demands → EE →				-0.002(0.01) [-0.01;0.01]
H5: Resources → SelfCare → WE →				0.005(0.002)** [0.001;0.01]
H6: Demands → SelfCare → EE →				-0.001(0.002) [-0.004;0.003]
Total indirect and total effects				
Total indirect (Resources)				0.08(0.02)*** [0.04;0.11]
Total (Resources)				0.26(0.03)*** [0.20;0.32]
Total indirect (Demands)				0.07(0.02)** [0.03;0.11]
Total (Demands)				0.11(0.04)** [0.04;0.18]
Total indirect (Overall)				0.15(0.03)*** [0.09;0.20]
Total (Overall)				0.37(0.05)*** [0.27;0.47]
R^2	.18(.03)***	.15(.03)***	.19(.03)***	.19(.03)***

Note. Values in square brackets indicate the 95% Monte Carlo confidence interval for each indirect effect. WE = work engagement, EE = emotional exhaustion. N = 956. † p < .10, * p < .05, ** p < .01, *** p < .001

Discussion

In this study, we aimed to integrate the HoL model (Franke et al., 2014) with the JD–R model (Bakker & Demerouti, 2017). We proposed SelfCare as a mediator between job characteristics and leaders' well-being. Moreover, we investigated leaders' job characteristics, SelfCare, and well-being as antecedents of StaffCare. SelfCare proved to be a relevant mediator in the relationship between job resources and work engagement and in the relationship between job demands and emotional exhaustion. Job resources predicted StaffCare, and work engagement mediated this relationship. We also found support for the serial mediation of the relationship between job resources and StaffCare through SelfCare and work engagement. The serial mediation of the relationship between job demands and StaffCare through SelfCare and emotional exhaustion was only significant when examining each job demand in isolation.

Theoretical Contribution

Based on the JD–R model (Bakker & Demerouti, 2017), we assumed that the personal resource SelfCare mediates the motivational process (the relationship between job resources and work engagement) and the health-impairment process (the relationship between job demands and emotional exhaustion) in leaders. The literature is inconclusive regarding the position of personal resources within the JD–R model (for an overview, see Bakker & Demerouti, 2017). We hypothesized that SelfCare had a mediating role, both in the motivational and the health-impairment process, and we found strong support for this in our data. This extends earlier empirical findings on the role of personal resources in general employee populations (Huang et al., 2016; Xanthopoulou et al., 2007) to the population of leaders. In the literature on the HoL model, SelfCare has been shown to be associated with various health outcomes, including irritation, decreased overall health, and health complaints (Franke et al., 2014). Empirical results indicate that SelfCare has a negative relationship with burnout (Horstmann, 2018) and a

positive relationship with well-being (Santa Maria et al., 2019), but SelfCare's relationship to motivational aspects of work have been ignored (Franke et al., 2014). With this study, we expand on these empirical findings by operationalizing strain, with emotional exhaustion as the most common measure within the JD–R model (Lesener et al., 2019), and applying it to the level of leaders. Moreover, we present evidence that SelfCare is positively related to leaders' work engagement. As such, we enlarge the range of outcomes studied with respect to SelfCare (Franke et al., 2014).

Furthermore, we argue that StaffCare can be understood as a special form of performance and that it is thus an outcome of the motivational and health-impairment processes of the JD–R model (Bakker & Demerouti, 2017). This was consistently supported for the motivational path while for the health-impairment path, this was only supported in the exploratory test of each individual job demand, but not for the index measure of demands. Therefore, arguments made by Olsen et al. (2016) and Kaluza, Boer, et al. (2020), who expected leaders to engage in more passive, less resource-consuming forms of leadership when under high pressure, seem not to hold true for the overall model. One reason for the difference between the results for the index measure of job demands and the test of each job demand in isolation lies in the job resources and work engagement. In the overall model, simultaneously with job demands, we also accounted for the leader's job resources and work engagement to explain StaffCare. On the other hand, in the exploratory tests, we did not account for the leader's environmental and individual job resources. Future research therefore should examine the interplay between job demands and resources as antecedents of leadership in more depth.

This study's primary goal is to identify the overall process by which job characteristics contribute to leaders' SelfCare, which in turn influences leaders' well-being and ultimately increases or reduces the StaffCare a leader shows toward employees. This overall process

constitutes the leader JD–R model (Figure 7). We integrated the HoL model (Franke et al., 2014) with the JD–R model, thus enabling the JD–R model to explain leaders' cognitions and behaviors. Data supported this theoretical model in several ways. First, the well-known relationships between job resources and job demands, as predictors of work engagement and emotional exhaustion (Bakker & Demerouti, 2007; Lesener et al., 2019), were replicated at the leader level. This further supports earlier findings showing that high job demands enhance strain in leaders (Knudsen et al., 2009; Mohr & Wolfram, 2010; Zimber et al., 2015) and that leader resources are protective factors (Dadaczynski et al., 2019; Knudsen et al., 2009; Zimber et al., 2015). We found that the same holds true for school principals as leaders. Furthermore, our results support the indirect relationship between job resources and StaffCare, serially mediated through SelfCare and leader work engagement. This supports the idea that StaffCare can be seen as an aspect of leader performance within the leader JD–R model. Therefore, we have gone beyond previous studies focusing on leadership behavior as an antecedent of the JD–R model at the employee level (e.g., Schaufeli, 2015), and we have described the process that motivates leaders to show health-oriented StaffCare toward their employees. Only by understanding this process can adequate measures be taken to encourage StaffCare cognition and behaviors in leaders.

The data did not support an indirect relationship between job demands (when combining interruptions, problems with teachers, and role conflicts to an index) and StaffCare through SelfCare and emotional exhaustion. Because the influence of job demands on emotional exhaustion through SelfCare was supported, leaders seem to be able to protect their StaffCare against a loss of resources when simultaneously considering their job resources. In some manner, leaders were able to stop the downward spiral (cf. Hobfoll, 2011) at this point, raising the question of what helps leaders to achieve this. Together with the exploratory analyses, we can conclude that job resources at the leaders'

availability make the difference. When not accounting for the leaders' job resources, the negative process from job demands through SelfCare and emotional exhaustion on StaffCare unfolds, leading to lower StaffCare in those weeks where job demands were higher than usual. Furthermore, earlier research pointed out that additional energetic, social, or climate resources might moderate the relationship between emotional exhaustion and StaffCare. For example, Collins and Jackson (2015) showed that leaders' attentional resource capacity moderated the relationship between their negative affect and their use of abusive supervisory practices. In a similar vein, the relationship between leaders' strain and their abusive supervisory practices was moderated by perceived organizational sanctions against aggression (Ng et al., 2018). It would be interesting to explore the effect of such moderators on the relationship between strain and StaffCare.

As an additional note, in this study, we also present empirical evidence for one of the theoretical assumptions of the HoL concept created by Franke et al. (2014). In the HoL model, it is assumed that the leader's SelfCare is the basis of HoL and that the leader's SelfCare enables them to show StaffCare toward their followers (Franke et al., 2014). By applying the study design of a weekly questionnaire for leaders while controlling for their previous level of StaffCare, we showed that weekly changes in SelfCare are positively related to changes in StaffCare. This provides empirical evidence that SelfCare is an important prerequisite to StaffCare; this conclusion goes beyond the correlations presented by Pundt and Felfe (2017).

Practical Implications

These results have several practical implications. Results support the notion that it is important to enhance leaders' job resources. Through the positive influence of job resources on StaffCare, the effect of enhancing leader resources trickles down to followers, increasing the positive effects of investment in this specific area. As such, gain cycles occur (COR theory; Hobfoll, 2011) when leaders' higher resources

enhance their health-oriented StaffCare, which enhances employees' health. In a healthy team, many leadership challenges (e.g., organizing substitute teachers in cases of teacher absence due to sickness) occur at rarer intervals than in a less healthy team. Thus, results of the current study underline the importance of leaders' job design for both leaders themselves and for their teams.

Another aspect of health promotion in organizations supported by this study is interventions aimed at enhancing the SelfCare of leaders. Because we showed that leader SelfCare enhances StaffCare toward followers, leader SelfCare is a worthwhile investment. Moreover, higher SelfCare makes leaders more authentic as a role model and thus positively affects the health of their followers. An example of such an intervention is the mental health training developed by Dimoff and Kelloway (2019). They showed that this training enhanced leaders' self-rated communication skills concerning mental health, their recognition of mental health warning signs, and the frequency of the actions they took to improve employees' resource usage.

Furthermore, our results show that StaffCare is a malleable and time-variant construct. A leader is not a person who either does or does not care for the health of their followers; rather, leaders show varying degrees of StaffCare toward their followers from one week to the next. Therefore, instead of investing in the search for new, eminent leaders (cf. Dóci et al., 2020), a more cost-effective and helpful strategy is to support leaders in showing HoL more often and more consistently across situations.

Limitations and Future Research

Although our study provides strong empirical evidence for the antecedents of HoL, it is not, of course, without limitations. First, because we used self-reported data from participating principals, common method bias may have led to an overestimation of relationships. However, to reduce this possibility, we followed recommendations by Podsakoff et al. (2003); we assured participants

that their answers were anonymous and that no right or wrong answers existed. As this is, to our knowledge, the first examination of the complex process by which job characteristics affect StaffCare within one study, we opted to use single-source data from the principals. Based on these initial findings, it would be interesting to replicate the present study using data from followers on their perceptions of StaffCare in the future.

Second, the relationships among variables within different time intervals remain unclear. Our results provide insight into processes at the leader level within a 5-week timeframe. It would be interesting to study these relationships in the long term over several months or even longer periods. In particular, results on the relationship between job demands and StaffCare are ambiguous. The correlational analyses showed a negative and significant relationship between these two variables on the within level, but no significant relationship on the between level. This suggests that leaders who experience higher-than-average job demands in a given week also report lower-than-average StaffCare in that week. However, person-level job demands did not systematically covary with StaffCare, indicating that leaders who experience higher demands in general do not show more or less StaffCare than colleagues with lower demands. As opposed to these bivariate findings, in the serial mediation model on the within level, there was not a significant direct relationship between job demands and StaffCare. Future research should further investigate these inconsistent findings. From a theoretical point of view, it seems plausible that the effect of job demands on StaffCare is positive in the short run, as suggested by Zaccaro et al.'s (2018) model of antecedents to leadership behavior. Over the course of a few weeks, when the workload of a leader or the team is higher, the leader might engage more in StaffCare. However, when demands remain high over several months, it seems reasonable that the assumptions derived from COR theory would apply and that leaders would then start to reduce positive leadership behavior. When demands accumulate over longer periods, leaders tend

to avoid further resource loss (Halbesleben et al., 2014) and act more defensively and less proactively (Olsen et al., 2016).

Third, we investigated principals, a specific sample of leaders. The job resources and demands selected for analysis were chosen specifically for this group of leaders. We chose this sample because the jobs of principals do not vary as much as those of leaders from different companies or at different hierarchical levels. Therefore, the hypothesized relationships can be examined in isolation more than would be possible in a more general sample of leaders. However, replication or extension of the findings to other occupational groups would be worthwhile to enhance the generalizability of the results.

Finally, in the present study, we tested the process by which job characteristics affect StaffCare through SelfCare and well-being, but we did not test the moderating role of job resources or demands. Within the JD–R model, job resources are thought to moderate the health-impairment process, and job demands are thought to moderate the motivational process (Bakker & Demerouti, 2017). To reduce the complexity of the model, we did not test these two assumptions. Future studies could focus on this aspect of the leader JD–R model and specifically test the interaction between leaders' job demands and resources.

Conclusion

HoL consists of leader self- and employee-directed cognition and behavior with a focus on health (SelfCare and StaffCare). This study represents an important step toward an understanding of situational and personal antecedents of StaffCare. The job resources and demands leaders experience exert an influence on the StaffCare they show toward their employees, mediated by their own SelfCare. Moreover, we showed that a process links leaders' job resources with their SelfCare, which, in turn, is positively related to their work engagement; higher work engagement ultimately results in higher StaffCare. Overall, we propose an integration of the HoL model with the JD–R model, and the

current study lends empirical support to most of the assumptions based on this integration.

General Discussion

This general discussion begins with an overview of the research findings, organized by the three research questions. Following that foundational material, the text will underscore the theoretical and methodological contributions of this thesis. Next, a discussion of the limitations of the three studies will undergird the ideas proposed for future research based on these limitations. Finally, I will describe the practical contributions that follow from this thesis.

Summary of Findings

The first aim of this thesis was to broaden the scope of outcomes studied in relationship to StaffCare. Based on the resilience literature (Britt et al., 2016; D. M. Fisher et al., 2019), two distinct operationalizations of employee resilience were employed. In Study I, the trajectories of physical and mental health in novice teachers were employed as the outcome of StaffCare. StaffCare predicted most of the group differences between the latent classes of the development of health. Only in the case of physical health did StaffCare fail to predict the difference between the resilient and the increasing trajectory of health. Nonetheless, this study presented strong evidence pointing to StaffCare as a relevant predictor for the development of health as an outcome. Thus, leaders at the study seminar who showed high StaffCare could enhance the probability for novice teachers to stay mentally and physically healthy throughout the socialization phase and prevent a decline in followers' health. This result goes beyond earlier empirical findings showing that StaffCare was significantly related to outcomes 1 week later (emotional exhaustion; Kaluza et al., 2021; Klebe, Klug, & Felfe, 2021) and 4 months later (general health, irritation, health complaints, work-family conflict; Franke et al., 2014). Although the formal ties between a leader at the study seminar and the novice teacher might differ when compared to leaders and followers in other organizations, both cases equally support the basic notion that the leader takes responsibility for the personal development as well as the

evaluation of the followers' performance. Therefore, the assumption can be made that, in other organizations as well as schools, StaffCare should play a vital role for the development of newcomers' health during their first months in the new job role.

As a second form of resilient outcome, I employed an approach that related the strain of teachers to their level of stressors during the COVID-19 pandemic, thus measuring their adaptation to the stressors. In this endeavor, StaffCare was considered as a predictor of these two forms of adaptation. However, the data did not support a direct relationship between StaffCare in stable times with the demonstration of resilience during the pandemic, and the possible reasons for this outcome can be found in section *Health-Oriented Leadership for Resilience in Times of Crisis.* Nevertheless, this result contradicts the findings of Study I, which confirmed the direct influence of StaffCare on the probability to stay healthy. Two aspects can explain this discrepancy. First, within Study I, StaffCare was measured at the same time as mental and physical health and was then used to explain the probability of class membership for the development of health across three time points. This first study included no time lag between the measurement of StaffCare and the demonstration of resilience in novice teachers. In contrast, Study II featured a time lag between StaffCare and the demonstration of resilience of 1.5 years. Within this time frame, many other unmeasured factors might have changed and exerted an influence on the demonstration of resilience of teachers within the context of the COVID-19 pandemic. Such an influence might have weakened the direct relationship between StaffCare and resilience demonstration to an extent that it was no longer significant. This outcome is in line with the simulation study of Dormann and Griffin (2015), where the authors noted that relationships between constructs in the field of industrial and organizational psychology were more probable in short time frames (shortitudinal studies) than for longer time frames. Further research could explore how differing time frames might affect the relationship between StaffCare and resilience and determine when strain and well-

being would be most pronounced. The findings from such a future endeavor could also help to formulate more exact practical implications. Another reason for the non-significant relationship observed between StaffCare and a demonstration of resilience potentially lies in the special context of the school. Since teachers mostly work autonomously (Buhren & Rolff, 2002; Semling & Zölch, 2008), the effect of a school principal's leadership might not exert its full potential on teacher outcomes. However, earlier meta-analytical findings have countered this argument by showing that the effects of transformational leadership on teacher outcomes is at least equivalent (Chin, 2007) to those found in general samples of the working population (Dumdum et al., 2013).

Overall, the studies within this thesis have further validated the HoL model by contributing to earlier studies' findings that StaffCare related negatively to emotional exhaustion (e.g., Kaluza et al., 2021) and positively to job satisfaction (e.g., Krick et al., 2021) and physical health (e.g., Klug et al., 2019). Studies I and II within this thesis presented strong evidence for the relationship of StaffCare with trajectories of health and evidence confirming the indirect effects of StaffCare in stable times on the demonstration of resilience during a crisis such as the COVID-19 pandemic. Thus, healthy leadership by leaders at the study seminars and by school principals was supported as a means to help (novice) teachers cope with the challenges and adversities of their jobs.

The second aim of this thesis was to examine the mechanisms in the relationship between StaffCare and resilience. Accordingly, PsyCap as a personal resource and psychosocial safety climate as a resource of the working environment were integrated into the theoretical model. Both mediators were relevant in conveying the positive relationship between StaffCare and employee resilience. In Study I, most of the differences between the resilient trajectory compared to the other empirically found trajectories of mental and physical health were predicted by StaffCare and PsyCap as individual antecedents as well as

by a mediation from StaffCare to the trajectories through PsyCap. In Study II, the positive relationship between pre-pandemic StaffCare and employee resilience during the COVID-19 pandemic was fully mediated through the teachers' perception of psychosocial safety climate and PsyCap. With these two studies, I add to the previous HoL-specific studies that have primarily focused on followers' SelfCare as a mediator (Franke et al., 2014; Horstmann, 2018; Kaluza et al., 2021; Klebe, Klug, & Felfe, 2021). Moreover, this research process constitutes one answer to Inceoglu et al.'s (2018) call (referring to the leadership literature, in general) to deepen scholarly understanding of mediators for the relationship between leadership and health. Since StaffCare, in particular, (and healthy leadership, more generally) is a specific leadership concept that has been shown to be related to—while remaining distinct from—other leadership concepts (for an overview, see Rudolph, Murphy, & Zacher, 2020), the theoretical challenge to explore specific mediators is undeniable. The triple-match principle proposed within the DISC model (Jonge & Dormann, 2003, 2006) supports this search for matching mediators, reflecting the authors' statement that a "strong relationship among the concepts should be observed if they are based on qualitatively identical processes" (Jonge & Dormann, 2003, p. 56). Thus, in terms of the relationship between healthy leadership and maintenance of health over time (Study I) or low strain despite stressor load (Study II), exploring mediators that match to the domain of mental/physical health and resilience is crucial. With PsyCap, I proposed a mediator that would more closely match to resilience as an outcome. The facets of optimism, self-efficacy, and hope have been treated as resilience-promoting factors within the resilience literature (D. M. Fisher & Law, 2021). Moreover, the facet of resilience can be interpreted as a form of hypothetical resilience demonstration (sample item: "I can get through difficult times at work because I've experienced difficulty before"; Luthans, Youssef, & Avolio, 2007). Participants provide information on how they *would* react if a major stressor *would* be apparent. Thus, these four facets together are closely

matched to the demonstration of resilience. In contrast, psychosocial safety climate as a construct more closely matches the StaffCare of a leader. The concepts of healthy leadership and psychosocial safety climate both include cognitive and behavioral aspects specific to health in the workplace (Dollard & Bakker, 2010; Franke et al., 2014). In summary, both proposed mediators, PsyCap and psychological safety climate, were theoretically plausible as specific mechanisms conveying the relationship between StaffCare and employee resilience and adaptation, and they both found support in the studies. From my point of view, there is no reason to believe that the mediating role of PsyCap should be different in schools compared to other organizations. However, concerning the psychosocial safety climate, one needs to acknowledge that school climate has a long tradition in educational research (Thapa et al., 2013); moreover, the initial proposition of psychosocial safety climate was based on a study with teachers (Dollard & Bakker, 2010). Thus, different results for this mediator could be suspected when conducting a similar study in a sample of the general working population. One reason for a difference could be that schools can be described as loosely coupled systems (Weick, 1976), and teachers for the most part work independently of one another (Buhren & Rolff, 2002). Therefore, the importance of a climate, which indicates "how things are done around here," is higher in schools than in other organizations where the need for cooperation is higher. Due to this relevance of the school climate and the observation that a school principal has a more pronounced position as the head of the school than leaders in other organizations (Gülşen & Gülenay, 2014), the relationship between leadership and climate could be slightly stronger in a population of teachers than in a general population of followers. However, as previously discussed, many previous studies have focused on relationships between leadership concepts other than healthy leadership and psychological safety climate (e.g., Tu et al., 2019; Xu et al., 2017). Therefore, I would expect to find that psychosocial safety

climate is also a mediator between healthy leadership and resilience in other populations.

The third goal of this thesis was to understand which factors at the leader level might contribute to or hinder the StaffCare a leader shows. Accordingly, I proposed a process model of predictors based on an integration of the HoL model with the JD–R model. Study III, a shortitudinal study, supported the notion that job resources are positively related to StaffCare via leaders' SelfCare and work engagement. However, support was lacking for the indirect relationship from overall job demands to StaffCare via leaders' SelfCare and emotional exhaustion. However, each individual job demand showed a significant indirect relationship with StaffCare via SelfCare and emotional exhaustion. Overall, the data strongly supported the integration of leaders' SelfCare as a mediator and StaffCare as an outcome in the motivational path of the JD–R model, but only provided weak support for a similar integration in the health-impairment path (Bakker & Demerouti, 2017). This finding means that the leaders who reported having more resources at their disposal in one week compared to the other weeks, were able to show more SelfCare. In turn, this higher level of SelfCare enhanced their work engagement and resulted in higher StaffCare in the same week. This observation offers several starting points for interventions at the leader level.

In the overall model, however, the integration of leaders' SelfCare as a mediator and StaffCare as an outcome of the health-impairment path, has not been supported. In particular, this finding occurred due to the fact that the basic notion of an existing relationship between leader well-being and leadership (cf. Kaluza, Boer, et al., 2020) has only been supported in part by the findings of this study. Specifically, the direct relationship of StaffCare was significant with work engagement but not with emotional exhaustion. Within the short time frame of 5 weeks, leaders who felt more engaged during a particular week showed more StaffCare in that same week. In contrast, leaders who felt more

exhausted during a particular week did not react by reducing StaffCare to protect their resources. However, in longer time frames where leaders experience exhaustion over multiple weeks or months, the theoretical notion that they would reduce their StaffCare and thus protect the resources at their disposal could still hold. As the findings of Study III do not rule out this possibility, future research should further investigate this observation.

The direct relationship between a leader's SelfCare and StaffCare, although theoretically stated (Franke et al., 2014), has only been tested empirically in one correlational study (Pundt & Felfe, 2017). The weekly data from Study III support the idea that a leader who shows more SelfCare will also report higher StaffCare toward their followers. This observation lends further support for one of the propositions claimed within the HoL model (Franke et al., 2014). Further theoretical contributions will be discussed in the next section.

Theoretical Contribution

Overall, the combined results of these studies support multiple theoretical implications. First, research on the HoL model, in particular, and healthy leadership, more generally, has focused on mental strain, physical health, or work-related well-being as outcomes (e.g., Franke et al., 2014; Horstmann & Remdisch, 2016; Köppe et al., 2018; Kranabetter & Niessen, 2017). Resilience as a possible outcome has been largely neglected in the literature on healthy leadership as well as in the general leadership literature (one of the first articles on this relationship was Harland et al., 2005). By integrating the stream of literature on healthy leadership with resilience research, I contribute to both research areas.

On the one hand, although the theoretical model on resilience in the workplace by Britt et al. (2016) integrates unit resources as one form of resource that contributes to the individual resilience capacity, leadership is not defined as one of the subcategories of unit resources. This lack is especially astonishing since leadership research has demonstrated the strong influence of various forms of leadership

(behavior) on mental health (e.g. Harms, Credé, et al., 2017; Montano et al., 2017), well-being (e.g. Skakon et al., 2010), and personal resources (e.g., Mazzetti et al., 2018). This overall provision of a rich resource for followers makes it theoretically and empirically plausible to assume that leadership as a unit resource should also contribute to a followers' demonstration of resilience. The results of Study I support this notion strongly. However, Study II only supports an indirect relationship between leadership and health.

On the other hand, these findings have implications for the HoL model as proposed by Franke et al. (2014): Specifically, the range of outcomes in the HoL model can be broadened. As part of the roof of the house of HoL, the authors first placed state of health, health complaints, irritation, and work-life balance as outcomes (Franke et al., 2014). Further studies broadened the range of outcomes to commitment (Horstmann & Remdisch, 2016), burnout and its components (Horstmann, 2018; Kranabetter & Niessen, 2017; Santa Maria et al., 2020), depression and well-being (Santa Maria et al., 2019), and performance (Klebe, Felfe, & Klug, 2021a). Based on the results of Studies I and II, this thesis lends empirical support to the notion that the demonstration of resilience can take its place among the other outcomes in the roof of the model (Figure 1).

Furthermore, following the arguments put forward by Wegge et al. (2014), the aim of this thesis was to study the leadership process by investigating mediators of the relationship between StaffCare and the demonstration of resilience. Gaining a deeper understanding of the leadership process constitutes an ongoing theoretical and practical area of interest. Studying mediators helps to theoretically disentangle "what leaders do and think" from the process of influencing the followers (Wegge et al., 2014). This approach can lead to more refined theories integrating different pathways of influence (cf. Inceoglu et al., 2018; Wegge et al., 2014). Accordingly, I proposed a refinement to the house of HoL (see Figure 1). On a practical note, this refinement helps to

highlight multiple reference points where interventions can be applied to further employee resilience. Together with the earlier empirical evidence, the studies of this thesis lend support to the idea that in addition to followers' SelfCare, other mediators between StaffCare and employee outcomes can be integrated into the HoL model. The first category of mediators that can be added to the HoL model are *personal resources*. Within the categorizations of Wegge et al. (2014), this concept would most closely fit the person-focused action; meanwhile, within the categorization by Inceoglu et al. (2018), it would fall within the categories of relational and social-cognitive mediators. Two reasons support the choice of personal resources as a category of mediators to add to the HoL model. First, since the mediator tested in Studies I and II of this thesis was a conglomerate of four personal resources, building the higher order construct of PsyCap (Luthans, Youssef, & Avolio, 2007), it is appropriate to eschew one of the more global categories proposed by Wegge et al. (2014) or Inceoglu et al. (2018) and instead focus on a more specific label. Second, to the best of my knowledge, no other studies on StaffCare have yet proposed mediators that would fit into the category of personal resources, person-focused action, or social-cognitive mediators. Therefore, the more conservative choice would be to name this category "personal resources," which is appropriate since these two studies are the only ones thus far to have tested this assumption. The second category of mediators that I added to the HoL model can be described as relational mediators (cf. Inceoglu et al., 2018). The data supported the notion that psychosocial safety climate mediates the relationship between StaffCare and a demonstration of resilience. Together with earlier research on mediators of StaffCare, such as social resources and demands (Horstmann & Remdisch, 2016) and LMX (Kaluza et al., 2021), the findings reported in this thesis provide strong reasons to assume that this category of mediators is relevant in the HoL model. Also, general working climate has already found empirical support as a mediator according to Franke et al. (2014); moreover, another study on a different concept of healthy leadership

also supported the mediating role of health climate (Gurt & Elke, 2009). Overall, these research findings present strong support for the idea that relational aspects are essential leadership mechanisms between StaffCare and health or resilience and that relational mediators can be added to the HoL model. However, the identity of other potential categories of mediators that could be relevant to the process of StaffCare in terms of employee outcomes remains unclear. Future research could explore motivational, affective, and identity-related mediators for StaffCare in order to clarify any additional specific mediators for healthy leadership and where the mechanisms are comparable to general concepts of leadership.

Lastly, the previous studies concerning antecedents of leadership relied on resource theories (COR, broaden-and-build, ego depletion), affect theories (affect infusion), and appraisal theories (transactional stress, organizational justice, displaced aggression) to establish the relationship between leaders' well-being and their leadership behavior (for an overview, see Kaluza, Boer, et al., 2020). However, this approach to the antecedents of leadership neglects the plausible expectation that, as is the case for all other employees, a leader's well-being is also influenced by various aspects of the workplace. Even those empirical studies that have taken the job characteristics of leaders into account have relied primarily on transactional stress theory (Mawritz et al., 2014) or COR theory (Dóci et al., 2020). Therefore, this thesis adopted the JD–R model as one of the most influential theoretical models in the field of work stress in arguing for a broader range of possible antecedents of StaffCare. This approach allowed the theoretical grounding to support adding the job characteristics of leaders into the mix and building a process model by integrating the HoL model with the JD–R model. One of the core assumptions within the HoL model, which denotes a direct relationship between a leader's SelfCare and StaffCare, was incorporated into the JD–R model by proposing that SelfCare is a mechanism between job characteristics and a leader's motivation and strain and by arguing for StaffCare as an outcome of the motivational

and health-impairment process of the JD–R model. Overall, Study III of this thesis thus furthers the knowledge network concerning StaffCare in that it has provided a better understanding of one set of antecedents. Thus, job resources and work engagement can be added to the HoL model; however, job demands and emotional exhaustion, although theoretically plausible, have not found consistent empirical support.

Methodological Contribution

In addition to its theoretical contributions, this thesis also offers three methodological contributions. These offerings are comprised of the focus on one specific sample of the working population (i.e., school staff), the use of multiple modeling techniques to offer insights on varying time scales, and the application of operationalizations for resilience that are novel to the literature on resilience in the workplace.

The three studies of this thesis focused on different subpopulations of staff in schools. Beneath the practical relevance of resilience and healthy leadership for this subpopulation, the choice of novice teachers, teachers, and school principals as study subjects reflected the methodological reason that the tasks, structures, and general working environments between schools are more similar than those found between organizations in general. Thus, systematic differences that are likely to occur from one organization to another have been largely reduced by focusing on schools as a particular form of organization. In this way, the outcomes and predictors of StaffCare have been studied in a more controlled setting than would have been possible with a general sample of the working population. Moreover, on a practical note, this approach facilitated demonstrating that the principals and the leaders at the study seminar exerted leadership and hence should not be seen as “only” managers (cf. Alvesson, 2019; Hunter et al., 2007). Since the mean values of StaffCare in all three studies have approximately the same magnitude (follower perspective 2.6–3.06, leader perspective 3.36) than in the norming population (follower perspective 2.2–3.18, leader perspective 3.23–4.37; Pundt & Felfe, 2017), principals and

leaders at the study seminar appeared to have seriously taken on this part of their leadership role.

The methods used to answer the three research questions involved a broad range of varying time scales and different statistical approaches. The longest time lag was chosen for Study II, with a difference of 1.5 years between the first and third measurement points. Following methodological recommendations, predictor, mediator, and outcome were all measured at differing time points in order to reduce common method bias and establish a timely separation of constructs (Podsakoff et al., 2003). By applying this long time lag, I was able to show how pre-pandemic leadership contributed to employee resilience in the pandemic. This idea adds to the previous literature on leadership in crisis situations that focused on leaders' behavior during the crisis. Meanwhile, Study I featured a shorter time interval of 10 weeks between the three measurement points. In this case, I applied the person-centered method of latent class growth analysis (Jung & Wickrama, 2008), which has been gaining in popularity in the literature on stress and health in the workplace. This approach, with its varied time frames, means that this thesis serves to answer the call to incorporate methods that better account for the role that time plays in work and organizational psychology in general and leadership research more specifically (Dinh et al., 2014; Vullinghs & Dóci, 2020). To the best of my knowledge, this was the first study to incorporate a model of mediation with the latent classes as an outcome, thus furthering the application of person-centered methods in this field of research. The shortest time lags were applied in Study III, entailing a design that included a weekly questionnaire over a span of 5 weeks. This design strictly controlled for the previous measurement of each mediator and outcome, thus further approaching the study of causality (Hunter et al., 2007). As noted previously, the focus of leadership research has largely been on cross-sectional study designs; only recently have experience sampling methods been applied to the study of leadership (for an overview, see Vullinghs & Dóci, 2020). By studying the within-person

fluctuations of HoL and applying the MSEM framework to model these fluctuations, Study III contributes to the understanding of time-varying antecedents of leadership. Overall, studying HoL within these three different time intervals allowed a triangulation of the results showing that within the shorter time frame of multiple weeks, StaffCare exerted a direct positive influence on employee resilience, and personal resources only partially mediated this relationship (Study I). In terms of the longer time frame of more than a year, because it was not possible to confirm a direct relationship between StaffCare and employee resilience, the mediation by PsyCap was necessary to convey the positive impact (Study II).

The traditional way to measure resilience is to use questionnaires that tend to operationalize resilience as stable traits or hypothetical reactions to stressful events (Amstadter et al., 2014; Kalisch et al., 2017). However, these instruments seem to have limited predictive power when compared to the Big Five Personality inventory (Waaktaar & Torgersen, 2010). Moreover, this approach has been criticized for only accounting for a small aspect of the large construct of resilience (Amstadter et al., 2014; Kalisch et al., 2017). Therefore, this thesis adopted two alternative ways to measure actual adaptation to stressful circumstances and applied them to the context of work. In the literature on resilience in clinical psychology, researchers have applied person-centered approaches such as latent class growth analysis (or general mixture models) as well as the idea of building residuals from stressor load and the strain experienced by the individual to determine an alternative approximation to the core of demonstration of resilience (e.g., Amstadter et al., 2014; Galatzer-Levy et al., 2018). Thus, I have applied these two ideas from the clinical field to the study of the working population and thereby have introduced this approach to this branch of the literature. A benefit of this technique is that it allows researchers to study predictors of demonstration of resilience that are relevant to the workplace.

Limitations and Future Research

Although the three studies of this thesis have several strengths, their limitations also require discussion. Moreover, ideas and suggestions for future research will emerge from these limitations.

Limitations

In part, the limitations of this thesis concern decisions related to the design of the included studies and, thus, rather methodological aspects. However, the focus on specific constructs represents in itself another limitation since it involves the necessary exclusion of other constructs, thus limiting the scope of the thesis. Specifically, one limitation is found in the fact that the ratings of leadership and resilience as well as the mechanisms between these two constructs were all sampled from the follower perspective in Studies I and II. This procedure raised the possibility of common-method bias (Podsakoff et al., 2003) since the relationship between predictors, mediator, and outcome might have reflected the influence of methodological artifacts. However, I reduced this risk by measuring the constructs at different time points in both Studies I and II. Moreover, the followers' perceptions of leadership attitudes and behaviors rather than the perceptions of the leaders themselves about their behavior toward their followers are arguably the most relevant factor in the resilience of followers (Vonderlin et al., 2020). This observation is in line with stress theories that emphasize the subjective appraisal process (Lazarus & Folkman, 1984). Along the same lines, different leadership researchers have argued for the importance of employee ratings of leadership when studying the outcomes of leadership at the followers' level (Klebe, Felfe, & Klug, 2021a; Perko et al., 2016).

Another limitation involves a problem that has been the topic of particular discourse in leadership research: endogeneity (Antonakis et al., 2014; Banks et al., 2018). Endogeneity is apparent when an independent variable correlates with the residual of the dependent variable, which can lead to either over- or underestimation of the

relationship at hand (Hill et al., 2021). This situation is problematic when the goal of a study is to establish causal relationships since causality requires exogeneity (the opposite of endogeneity; Bliese et al., 2020). As Banks et al. (2018) emphasized, the risk of endogeneity is relatively high in leadership research, since in the traditional design of leadership studies, where a leadership construct is hypothesized to relate to an employee outcome (as applied in Studies I and II in this thesis), a common cause of predictor and outcome is often apparent (see also Antonakis et al., 2014). Moreover, self-report data are especially prone to an endogeneity bias (B. Cooper et al., 2020), even more so when all variables are measured with the same scale format (e.g., a 5-point Likert-scale with the same labels for endpoints; Hill et al., 2021). In the studies of this thesis, I applied several methods to reduce endogeneity. For example, Study I involved a very homogenous group of participants in terms of previous experience with teaching, which resulted from sampling only novice teachers who started their probationary teaching period at the same time. This technique controlled for the risk of previous experience with teaching being an omitted variable. In Study II, dropout analysis helped prevent the problem of selection into the sample as a potential source of endogeneity. Moreover, the exogenous event of the COVID-19 pandemic hitting Germany served as a measure to counter the problem of simultaneity associated with endogeneity. However, although several methods to reduce endogeneity were applied in the studies of this thesis, these have not been considered systematically in terms of possible sources of endogeneity (see Hill et al., 2021, for an overview of the sources). Therefore, causes of endogeneity might still be reflected in the study results, such as omitted variables (e.g., a chronic illness that correlated with the followers' perception of their leaders' StaffCare and with demonstration of resilience) or selection of treatment (e.g., only teachers whose principals agreed to send out the study information within their school were able to participate; it seems reasonable that a study advertised as being focused on health and resilience might gain more attention from

principals who cared about these topics and thus would have yielded elevated ratings of StaffCare than those principals who did not agree to their school's participation or did not even send out the study information within their school).

Yet another limitation that is related to endogeneity is the problem of a confoundation of healthy leadership with its outcome, the health of followers and leaders, as criticized by Rudolph, Murphy, and Zacher (2020). However, reflecting the deductive development of the HoL model, StaffCare was not merely defined as being healthy because it is positively related to health outcomes; instead, the attitudinal and behavioral components of StaffCare in itself were recognized as having the potential to be beneficial for health. Whether this positive effect materialized might have depended on various individual or environmental factors (see, for example, studies on leaders' personal initiative, the context of a crisis, or followers' expectations of their leader as moderators of this relationship; Horstmann, 2018; Kaluza et al., 2021; Klebe, Felfe, & Klug, 2021a). From my point of view, the problem of confoundation of leadership constructs with the desired outcome of health is even more critical in research focused on the health-promoting effects of traditional leadership concepts as reviewed and meta-analyzed by Montano et al. (2017) and other scholars. For example, it has been stated that, because transformational leadership shows a positive relationship with well-being or a negative relationship with burnout, it is beneficial for employee health (Montano et al., 2017). However, aspects such as reverse causation (i.e., healthier employees perceive their leaders as being more constructive in their leadership behavior; van Dierendonck et al., 2004) and publication biases (i.e., non-significant findings regarding the relationship between transformational leadership and health are omitted from the body of literature) might inflate these relationships and invalidate the assumption that transformational leadership should be enhanced to foster followers' health. Therefore, the post-hoc definitions of various traditional leadership concepts as being "healthy" (Inceoglu et al., 2018; Montano

et al., 2017) are more problematic than deductively developing a leadership concept focused on aspects that are theoretically plausible as beneficial for health in the workplace and afterward validating this assumption by studying the relationships of this concept of healthy leadership as it relates to employee health.

Lastly, within this thesis, I chose to measure the demonstration of resilience via the development of health and as the deviation of an individual from the regression of stressors with strain. Thus, health and mental well-being are a fundamental part of this operationalization. Moreover, Study III included a leader's work engagement and emotional exhaustion as mediators. Thus, overall, health and mental well-being are a crucial part of the research model. That said, health and well-being—and, thus, also the demonstration of resilience—are under the influence of multiple factors. As Montano et al. (2017) argued, factors influencing health and mental well-being can be attributed to but are not limited to biological, social, and psychological factors. Healthy leadership as one specific form of a social factor contributing to an employee's well-being is only one small part of a larger puzzle. By limiting the predictors to the factors that employees experience in their workplace, a multitude of other factors that contribute to or hinder the mental health of employees is neglected. However, adults spend a considerable amount of their waking hours at work, and employers have a legal obligation to care for the health of their employees; therefore, the social relevance of factors at the workplace that can contribute to a healthy development of employees is exceptionally high.

Future Research

The following ideas for future research follow logically from the limitations of the studies of this thesis as well as some of the main critiques concerning leadership research as presented in the section *Critical Discussion of Leadership Research* of this thesis. One of these criticisms was Alvesson's (2019) discussion of reification, summarized in the observation that research in the field of leadership puts together

various aspects or behaviors into one style of leadership and thereby creates a seemingly coherent object. This phenomenon becomes especially problematic in cases where the theoretical basis of the decision regarding which aspects form one leadership style is weak (as for transformational leadership) or where the different aspects are contrary to each other (as for authentic leadership; Alvesson, 2019). Within the HoL concept, the theoretical consideration for combining awareness, value, and behavior is strong; however, the HoL concept might also be subject to this reification. As one remedy, I propose the use of person-centered approaches to HoL in future research. Person-centered analyses allow the researcher to account for a high complexity of different facets (such as the subscales that compose the HoL concept) and reduces this complexity by computing latent profiles, thus clustering people in homogenous groups. Through this approach, a person is not generally high or low on HoL (or SelfCare and StaffCare); instead, different variations of the subscales are possible and can be interpreted. Thus, HoL does not become an "it" but rather represents composite thoughts and behaviors relevant to employees' health, which can be apparent in different leaders with differing weights. One example of this approach is Klug et al.'s (2019) use of the person-centered method of latent profile analysis to study leaders' SelfCare and StaffCare as rated by followers. The authors differentiated between four profiles in two separate samples and observed significant variation in the health outcomes of the followers in these profiles (Klug et al., 2019). Klug et al.'s study offers a first impression of how inconsistencies in leadership cognitions and behaviors toward oneself and others can be uncovered by latent profile analysis. Another helpful design within the person-centered approach might be to use repeated measurements of the HoL subscales and conduct a latent transition model. Since, according to the current understanding, leadership behavior is not assumed to be stable over time (which was supported by the ICCs in Study III of this thesis), latent transitions could facilitate understanding how and why leaders might change, for example, from a consistent to an inconsistent profile

over time. Based on the results of Study III of this thesis, job characteristics, strain, or motivation of leaders might help explain why, at one point in time, a leader might be high in SelfCare and StaffCare, while at another point in time, the same individual might show a profile of leader sacrifice, instead (i.e., low SelfCare while maintaining high StaffCare).

Moreover, the relationship between awareness, value, and behavior as the subscales of StaffCare and SelfCare need further research consideration. In the three studies of this thesis, leaders' cognitions and values were intermingled with leaders' behaviors (Studies I and III), or only cognitive aspects were considered (Study II). This approach reflects much of the earlier research on the HoL concept (e.g., Horstmann, 2018; Santa Maria et al., 2019). Some conceptualizations of leadership even completely conflate value and behavior (for example, ethical leadership). However, it is theoretically relevant to separate cognitions and values from behaviors. For example, both the theory of cognitive dissonance (Festinger, 2001) and the theory of planned behavior (Ajzen, 1991) support this assumption (Kaluza, Schuh, et al., 2020; Turgut et al., 2020). In combination, they lead to the premise that a leader's cognitions and values are antecedents for showing health-related behavior since people are motivated to act in accordance with their cognitions. The HoL approach presents health awareness (cognition), the value of health (value), and behavior (lifestyle and work-related health behavior) as separate facets of HoL. This current situation leads to the need for future works on leadership to arrive at equivalent differentiations of cognition/value and behavior for leadership concepts. Such a differentiation would help make the theoretical development of the field of leadership research more profound, comprehensible, and easily applicable to practice. Based on this theoretical development, future empirical research on the HoL model should consider health awareness and the value of health as antecedents of health behavior. One of the first studies to test this assumption was conducted by Kaluza, Schuh, et al. (2020). In their

findings, the authors reported that the leaders' health awareness (as rated by the leader) was positively related to their health behavior (as rated by the followers) in two separate samples. In a similar vein, Turgut et al. (2020) demonstrated that attitudes of health-promoting leadership were positively related to health-promoting leadership behavior. Since neither of these studies employed any methods to study the causal order, future research should further investigate the causal relationship between cognitions/values and behavior of healthy leadership, for example, by employing vignette studies or cross-lagged panels.

Although the studies in this thesis all featured a longitudinal or shortitudinal design, time was not considered a variable. In line with Joseph-Richard et al.'s (2021) call for a time-sensitive approach to the study of leadership and leadership development programs, future research on the HoL model and interventions that aim to foster HoL could also adopt designs and methods of analysis that explicitly model time. Most of the existing literature on the HoL model is cross-sectional in nature or uses a longitudinal design to separate the measurement of predictor and outcomes. However, study designs that integrate the role of time in a theoretical model or empirical study are missing from this body of literature. Since interventions to enhance SelfCare and/or StaffCare in leaders have been proposed (Krick & Felfe, 2020; Schulte et al., 2018), the consideration of adequate designs for such program evaluations is vital. The classic taxonomies to measure the success of an intervention proposed by Kirkpatrick (1970) or Birdi (2010) ignore such questions as when to measure the outcomes under consideration. Researchers have acknowledged the importance of specifying the short-, medium-, and long-term outcomes of an intervention, together with the concrete time frames in which these should occur (Joseph-Richard et al., 2021); however, such factors have seldom been implemented in evaluative designs. Hence, a study examining the effects of a HoL intervention would have to measure pre-intervention values on all outcomes under consideration. As short-term outcomes,

during or directly after participating in a HoL intervention, job satisfaction, organizational commitment, and work engagement could be considered. In comparison, the long-term outcomes that occur over time frames of several weeks to months could entail the change in leadership cognitions and behaviors (cf. Joseph-Richard et al., 2021).

Apart from the practical application of the HoL model in the form of interventions, future research should further explore the variability of SelfCare and StaffCare. Until now, little is known about the situational and timely variability of the facets of HoL. As one example, understanding how StaffCare changes over time frames of days, weeks, and months would also facilitate the study of time-sensitive factors that help or hinder leaders in terms of showing StaffCare. Such an approach would allow further development of the theoretical basis of the HoL concept while also highlighting factors relevant for practicians.

Furthermore, as DeRue (2011) asserted, leadership is most often seen as a one-directional process of a leader occupying a certain position within the organizational hierarchy and their influence on the followers on the hierarchical level below them. However, this conceptualization of leadership excludes the processes of mutual influence and leadership by team members without formal leadership positions (DeRue, 2011). By specifying SelfCare as one core aspect of the HoL model, the model's creators acknowledged the influence that employees can exert on their own health. However, to my knowledge, no study on healthy leadership has yet answered the question regarding how processes within the team can also represent a facet of healthy leadership. As one example of a potential topic of study, it could be interesting to explore whether team-level variables, such as being mentally and physically healthy or showing more SelfCare, might make it easier for the leader to show SelfCare and StaffCare. Once again, methods that allow for a causal inference are needed in this case, such as experimental or vignette studies or cross-lagged panels.

Moreover, another interesting topic for future research is the possibility of exploring situational or context variables as moderators (Hunter et al., 2007; Nielsen & Taris, 2019). The focus of this thesis was on the mechanisms of healthy leadership; however, both the current and previous research have established how the context exerts an influence on the relationship between StaffCare and follower outcomes (Horstmann, 2018; Kaluza, Schuh, et al., 2020; Klebe, Felfe, & Klug, 2021a). Thus, an understanding of the influence of contextual factors on the relationship between leadership and follower health is already in place, as demanded by Wegge et al. (2014). However, the realm of possible noteworthy moderators has not been fully explored. Further moderators of interest for the relationship between StaffCare and follower outcomes could include the degree of remote working, power distance as a cultural difference, or the congruence of leader and follower genders. In addition, it also promises to be intriguing to establish relevant moderators for other paths within the HoL model. For example, the relationship between the SelfCare of leaders and their StaffCare could be contingent upon their cognitive appraisal of their leadership role or their motivation.

Finally, I firmly believe that healthy leadership is especially suited to handle the current and future challenges of work. As Klebe, Felfe, and Klug (2021b) and Study II of this thesis showed, StaffCare is helpful in handling the consequences that the COVID-19 pandemic has brought to the workplace. Future research can also focus on investigating HoL as a means to cope with the challenges posed by an aging workforce (see Boehm et al., 2016) as well as challenges related to the increasing work in digital space (see Bregenzer & Jiménez, 2021; Efimov et al., 2021).

Practical Contribution

In addition to the theoretical implications that this thesis offers, the findings of the associated studies also facilitate deriving practical implications. These suggestions, which mainly concern the training of school principals, teachers, and novice teachers, are directed at the

institutions that offer such training (in most federal states of Germany, this description refers to specific centers for school quality and teacher education as part of the Ministry of Education). Nevertheless, these recommendations can also be valuable for other leaders outside of the school context since it is very plausible that the same relationships also hold in organizations other than schools. In the words of Wegge et al. (2014),

> Such findings are important, in particular as an antidote to the inclination for organizations and supervisors to disavow responsibility for the promotion and protection of employee health. In our view, this is a major dereliction of organizations' duty of care, and one that needs to be redressed in both theory and practice. (p. 14)

Only relying on prevention and intervention at the individual worker's level puts the burden on the individual, their appraisal of the working environment, and their individual coping resources. Therefore, contextual measures of prevention need to closely accompany interventions at the individual level.

Since StaffCare displayed a relationship with the demonstration of resilience both directly and indirectly, it offers a plausible approach to interventions at the contextual level. Accordingly, both school principals and the teaching staff at the seminars for novice teachers can be informed about and trained in SelfCare and StaffCare. Although the curricula of different providers of principal training include the topic of leadership, they do not (yet) systematically address healthy leadership. The results of Studies I and II offer insight on the direct and indirect positive effects of StaffCare provided by school principals and the staff at seminars for novice teachers on the demonstration of resilience of teachers and novice teachers, thus supporting the conclusion that such training would be a worthwhile investment. Schulte et al. (2018) developed and evaluated HoL training with positive results. However, as Nielsen and Taris (2019) reported, interventions involving other leadership concepts have produced mixed results; additionally, context

variables should be considered when evaluating leadership trainings. Therefore, the establishment of HoL in the curricula of providers of principal training could further profit from scientific evaluation to attain a better understanding of the circumstances under which the intervention content is transferred into everyday life at the school as well as when the teachers and not only the leaders themselves begin to notice a difference.

Studies I and II of this thesis showed that participating (novice) teachers considerably varied in the degree to which they demonstrated resilience. Observations that emerged from the studies included a group of novice teachers with decreasing physical health and one with a decreasing mental health. Moreover, some teachers reported a very high amount of irritation while at the same time reporting only a moderate degree of stressors. The concept of StaffCare already includes the notion that leaders should be aware of stress signals from their team members, a concept that seems especially critical in a group of (novice) teachers. Leaders should be attentive toward those (novice) teachers who seem to struggle and offer to work on ways to cope with the stressors of the working environment together or consider how to attenuate stressors for those struggling.

In addition to revealing the influence of leadership on the demonstration of resilience of followers, these studies also showed the crucial role of psychosocial safety climate and PsyCap. Based on these findings, the climate for psychosocial safety can be targeted directly to enhance teachers' demonstration of resilience. On the one hand, this goal can be achieved through a relatively formal "top-down" process, as proposed by Dollard and Bailey (2019). On the other hand, each member of a team or organization also contributes to the climate at the unit level in a "bottom-up" process; thus, teachers can be encouraged to shape the climate in their school by their beliefs, values, and actions (Schneider et al., 2013). Moreover, training that addresses the individual resource of PsyCap should also help enhance employee resilience. Luthans et al.

(2006) proposed and evaluated an initial very short PsyCap intervention, where the four aspects of PsyCap were trained in the space of 1 hour. More extensive training has been built on that early attempt, and meta-analytically, their effectiveness has been supported (Lupșa et al., 2020). Offering such a training opportunity for (novice) teachers should help them stay physically and mentally healthy despite their challenging working environment.

Based on the study examining the antecedents of StaffCare among school leaders (Study III), it can be deduced that the working conditions of leaders offer a practical starting point for interventions. An increase in work resources can contribute to more SelfCare on the part of the leaders themselves, along with higher engagement and more StaffCare. That said, a reduction of work demands allows for more SelfCare and thus less exhaustion on the leaders' part. Thus, increasing the resources of school leaders seems to trigger a process that benefits teachers in turn. If school principals have more resources at their disposal, it will presumably have a positive effect on the health of the teaching staff via StaffCare. This pathway has already received strong empirical support (Franke et al., 2014; Horstmann, 2018; Krick et al., 2021). More specifically, the resources of delegation opportunities, autonomy, and support by colleagues examined in this thesis can serve as starting points. Nevertheless, it should not be forgotten that the design of job demands is also a vital factor, at least for the school principals themselves—even if the findings of Study III only inconsistently support expectations of any further effects on the teaching staff. In any event, it is logical to conclude that a reduction of school principals' job demands especially benefits their SelfCare and reduces the possibility of exhaustion. Therefore, in line with Harms, Credé, et al. (2017), I posit that apart from offering interventions tailored to enhance specific leadership behaviors, attitudes, and values, the job resources and demands experienced by leaders can also be targeted within the processes of job design, or the strain of leaders can be addressed via resilience interventions. For example, a study by Röttger et al. (2017)

showed beneficial effects of sleep coaching on the SelfCare of German military personnel in an intervention study with a control group. Although the participants also reported a decrease in irritation, the results for that element did not differ significantly from those of the control group (Röttger et al., 2017). Similarly, Krick and Felfe (2020) reported on a "strengths and resources training" that was also applied using a randomly assigned control group design. The authors described the positive effects of their training on the SelfCare and heart-rate variability of participants. The study findings also included qualitative written impressions and interviews with participants that supported a good acceptance and transfer into practice (Krick & Felfe, 2020).

Conclusion

The aim of this thesis was to systematically examine HoL within the school staff. Since a vast body of empirical research has confirmed the high strain that teachers are subject to, an application of HoL to this specific population was deemed valuable. Therefore, the relationship between followers' perceptions of StaffCare and their demonstration of resilience was proposed and tested. Moreover, PsyCap and psychosocial safety climate were introduced as mechanisms of this relationship. Additionally, possible predictors of StaffCare were proposed based on the JD–R model in order to further the theoretical basis of the study of leadership antecedents.

The findings presented in this thesis suggest that principals and leaders at the study seminar can foster the demonstration of resilience in (novice) teachers at their schools and seminars by practicing health-oriented cognitions and behaviors. Procedurally, StaffCare positively related to the (novice) teachers' internal resource of PsyCap and to psychosocial safety climate as an external resource, with both resources contributing to the teachers' resilience. Moreover, high job resources of school principals were shown to have the potential to trickle down to the teachers via the principals' SelfCare, work engagement, and StaffCare.

Thus, this thesis explored the leadership processes at the follower and leader levels and contributed to separate what a leader “thinks or does” from the process of influencing followers. Although future studies are recommended to explore further research questions around the HoL model, this thesis has succeeded in adding some pieces to the puzzle of healthy leadership and laid the foundation for healthy leadership in the school context.

References

Abele, A. E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior*, *74*(1), 53–62. https://doi.org/10.1016/j.jvb.2008.10.005

Adler, A. B., Adrian, A. L., Hemphill, M., Scaro, N. H., Sipos, M. L., & Thomas, J. L. (2017). Professional stress and burnout in U.S. Military medical personnel deployed to Afghanistan. *Military Medicine*, *182*(3), e1669-e1676. https://doi.org/10.7205/MILMED-D-16-00154

Ahmed, F., Zhao, F., Faraz, N. A., & Qin, Y. J. (2020). How inclusive leadership paves way for psychological well-being of employees during trauma and crisis: A three-wave longitudinal mediation study. *Journal of Advanced Nursing.* Advance online publication. https://doi.org/10.1111/jan.14637

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, *84*(5), 888–918. https://doi.org/10.1037/0033-2909.84.5.888

Alessandri, G., Perinelli, E., Longis, E. de, Schaufeli, W. B., Theodorou, A., Borgogni, L., Caprara, G. V., & Cinque, L. (2018). Job burnout: The contribution of emotional stability and emotional self-efficacy beliefs. *Journal of Occupational and Organizational Psychology*, *91*(4), 823–851. https://doi.org/10.1111/joop.12225

Allen, J., Rowan, L., & Singh, P. (2020). Teaching and teacher education in the time of COVID-19. *Asia-Pacific Journal of Teacher Education*, *48*(3), 233–236. https://doi.org/10.1080/1359866X.2020.1752051

Alvarez, J. L., & Svejenova, S. (2006). *Sharing executive power: Roles and relationships at the top*. Cambridge University Press.

Alvesson, M. (2019). Waiting for Godot: Eight major problems in the odd field of leadership studies. *Leadership*, *15*(1), 27–43. https://doi.org/10.1177/1742715017736707

Amstadter, A. B., Myers, J. M., & Kendler, K. S. (2014). Psychiatric resilience: Longitudinal twin study. *The British Journal of Psychiatry: The Journal of Mental Science*, *205*(4), 275–280. https://doi.org/10.1192/bjp.bp.113.130906

Anderson, D., Plotnikoff, R. C., Raine, K., & Barrett, L. (2005). Development of measures of individual leadership for health promotion. *International Journal of Health Care Quality Assurance Incorporating Leadership in Health Services*, *18*(2-3), i–xii. https://doi.org/10.1108/13660750510594846

Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2014). Causality and endogeneity: Problems and solutions. In D. V. Day (Ed.), *The Oxford Handbook of Leadership and Organizations* (pp. 93–117). Oxford University Press.

Antonovsky, A. (1988). Unraveling the mystery of health: How people manage stress and stay well (1. ed., 2. print). The Jossey-Bass health series. Jossey-Bass.

Arnold, K. A. (2017). Transformational leadership and employee psychological well-being: A review and directions for future research. *Journal of Occupational Health Psychology*, *22*(3), 381–393. https://doi.org/10.1037/ocp0000062

Arnold, M., & Rigotti, T. (2021). Is it getting better or worse? Health-oriented leadership and psychological capital as resources for sustained health in newcomers. *Applied Psychology*, *70*(2), 709–737. https://doi.org/10.1111/apps.12248

Avey, J. B. (2014). The Left Side of Psychological Capital. *Journal of Leadership & Organizational Studies*, *21*(2), 141–149. https://doi.org/10.1177/1548051813515516

Avey, J. B., Avolio, B. J., & Luthans, F. (2011). Experimentally analyzing the impact of leader positivity on follower positivity and performance. *The Leadership Quarterly*, *22*(2), 282–294. https://doi.org/10.1016/j.leaqua.2011.02.004

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes,

behaviors, and performance. *Human Resource Development Quarterly*, *22*(2), 127–152. https://doi.org/10.1002/hrdq.20070

Avolio, B. J. (2007). Promoting more integrative strategies for leadership theory-building. *The American Psychologist*, *62*(1), 25-33; discussion 43-7. https://doi.org/10.1037/0003-066X.62.1.25

Avolio, B. J., & Bass, B. M. (1991). The full range of leadership development programs: Basic and advanced manuals. Bass, Avolio & Associates.

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, *16*(3), 315–338. https://doi.org/10.1016/j.leaqua.2005.03.001

Badura, B., Litsch, M., & Vetter, C. (Eds.). (1999). Fehlzeiten-Report 1999: Psychische Belastung am Arbeitsplatz [Absenteeism Report 1999: Psychological stress at the workplace]. Springer.

Baer, M., & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, *24*(1), 45–68. https://doi.org/10.1002/job.179

Bailey, T. S., Dollard, M. F., McLinton, S. S., & Richards, P. A. M. (2015). Psychosocial safety climate, psychosocial and physical factors in the aetiology of musculoskeletal disorder symptoms and workplace injury compensation claims. *Work & Stress*, *29*(2), 190–211. https://doi.org/10.1080/02678373.2015.1031855

Baker, C. N., Peele, H., Daniels, M., Saybe, M., Whalen, K., Overstreet, S., & Trauma-Informed Schools Learning Collaborative The New Orleans (2021). The experience of COVID-19 and its impact on teachers' mental health, coping, and teaching. *School Psychology Review*, 1–14. https://doi.org/10.1080/2372966X.2020.1855473

Bakker, A. B., & Demerouti, E. (2007). The job demands–resources model: state of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Demerouti, E. (2014). Job demands–resources theory. In C. L. Cooper (Ed.), *Wellbeing* (Vol. 79, pp. 1–28). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118539415.wbwell019

Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273–285. https://doi.org/10.1037/ocp0000056

Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, *10*(2), 170–180. https://doi.org/10.1037/1076-8998.10.2.170

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 389–411. https://doi.org/10.1146/annurev-orgpsych-031413-091235

Bakker, A. B., & Xanthopoulou, D. (2013). Creativity and charisma among female leaders: the role of resources and work engagement. *The International Journal of Human Resource Management*, *24*(14), 2760–2779. https://doi.org/10.1080/09585192.2012.751438

Bal, M., Kordowicz, M., & Brookes, A. (2020). A workplace dignity perspective on resilience: Moving beyond individualized instrumentalization to dignified resilience. *Advances in Developing Human Resources*, *22*(4), 453–466.

Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122–147.

Banks, G. C., Gooty, J., Ross, R. L., Williams, C. E., & Harrington, N. T. (2018). Construct redundancy in leader behaviors: A review and agenda for the future. *The Leadership Quarterly*, *29*(1), 236–251. https://doi.org/10.1016/j.leaqua.2017.12.005

Barling, J., & Cloutier, A. (2017). Leaders' mental health at work: Empirical, methodological, and policy directions. *Journal of Occupational Health Psychology*, *22*(3), 394–406. https://doi.org/10.1037/ocp0000055

Barling, J., Loughlin, C., & Kelloway, E. K. (2002). Development and test of a model linking safety-specific transformational leadership and occupational safety. *Journal of Applied Psychology*, *87*(3), 488–496. https://doi.org/10.1037//0021-9010.87.3.488

Barnes, C. M., Guarana, C. L., Nauman, S., & Kong, D. T. (2016). Too tired to inspire or be inspired: Sleep deprivation and charismatic leadership. *Journal of Applied Psychology*, *101*(8), 1191–1199. https://doi.org/10.1037/apl0000123

Barrett, L., Plotnikoff, R. C., Raine, K., & Anderson, D. (2005). Development of measures of organizational leadership for health promotion. *Health Education & Behavior: The Official Publication of the Society for Public Health Education*, *32*(2), 195–207. https://doi.org/10.1177/1090198104271970

Basen-Enquist, K., Suchanek Hudmon, K., Tripp, M., & Chamberlain, R. (1998). Worksite health and safety: Scale development and effects of a health promotion intervention. *Preventive Medicine*, *27*, 111–119.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Collier Macmillan Publishers.

Bass, B. M. (1995). Theory of transformational leadership redux. *Leadership Quarterly*, *6*(4), 463–478.

Bauer, J., Unterbrink, T., Hack, A., Pfeifer, R., Buhl-Griesshaber, V., Müller, U., Wesche, H., Frommhold, M., Seibt, R., Scheuch, K., & Wirsching, M. (2007). Working conditions, adverse events and mental health problems in a sample of 949 German teachers. *International Archives of Occupational and Environmental Health*, *80*(5), 442–449. https://doi.org/10.1007/s00420-007-0170-7

Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: A meta-analytic review of antecedents, outcomes, and methods. *The Journal of Applied Psychology*, *92*(3), 707–721. https://doi.org/10.1037/0021-9010.92.3.707

Bauer, T. N., & Erdogan, B. (2014). Delineating and reviewing the role of newcomer capital in organizational socialization. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 439–457. https://doi.org/10.1146/annurev-orgpsych-031413-091251

Birdi, K. (2010). The taxonomy of training and development outcomes (TOTADO): A new model of training evaluation. Annual BPS Division of Occupational Psychology Conference, Brighton, UK.

Blau, P. M. (1964). *Exchange and power in social life*. John Wiley & Sons.

Bliese, P. D., Schepker, D. J., Essman, S. M., & Ployhart, R. E. (2020). Bridging methodological divides between macro- and microresearch: Endogeneity and methods for panel data. *Journal of Management*, *46*(1), 70–99. https://doi.org/10.1177/0149206319868016

Boehm, S. A., & Baumgaertner, M. K. (2014). Health-focused leadership – Prevention and intervention as enablers of work ability and performance. *Academy of Management Proceedings*, *2014*(1), 15623. https://doi.org/10.5465/ambpp.2014.15623abstract

Boehm, S. A., Baumgaertner, M. K., & Kreissner, L. M. (2016). The relationship between leadership and health: A comparison of general and health-focused leadership approaches. In M. Wiencke, M. Cacace, & S. Fischer (Eds.), *Healthy at work* (pp. 87–102). Springer International Publishing. https://doi.org/10.1007/978-3-319-32331-2_7

Boehm, S. A., & Dwertmann, D. J. G. (2015). Forging a single-edged sword: Facilitating positive age and disability diversity effects in the workplace through leadership, positive climates, and HR practices. *Work, Aging and Retirement*, *1*(1), 41–63. https://doi.org/10.1093/workar/wau008

Boin, A., Kuipers, S., & Overdijk, W. (2013). Leadership in times of crisis: A framework for assessment. *International Review of Public Administration*, *18*(1), 79–91.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *The American Psychologist*, *59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Borrelli, I., Benevene, P., Fiorilli, C., D'Amelio, F., & Pozzi, G. (2014). Working conditions and mental health in teachers: A preliminary study. *Occupational Medicine*, *64*(7), 530–532. https://doi.org/10.1093/occmed/kqu108

Bouckenooghe, D., Zafar, A., & Raja, U. (2015). How ethical leadership shapes employees' job performance: The mediating roles of goal congruence and psychological capital. *Journal of Business Ethics*, *129*(2), 251–264. https://doi.org/10.1007/s10551-014-2162-3

Bouzari, M., & Karatepe, O. M. (2017). Test of a mediation model of psychological capital among hotel salespeople. *International Journal of Contemporary Hospitality Management*, *29*(8), 2178–2197. https://doi.org/10.1108/IJCHM-01-2016-0022

Bowling, N. A., Khazon, S., Alarcon, G. M., Blackmore, C. E., Bragg, C. B., Hoepf, M. R., Barelka, A., Kennedy, K., Wang, Q., & Li, H. (2017). Building better measures of role ambiguity and role conflict: The validation of new role stressor scales. *Work & Stress*, *31*(1), 1–23. https://doi.org/10.1080/02678373.2017.1292563

Breevaart, K., & Bakker, A. B. (2018). Daily job demands and employee work engagement: The role of daily transformational leadership behavior. *Journal of Occupational Health Psychology*, *23*(3), 338–349. https://doi.org/10.1037/ocp0000082

Bregenzer, A., & Jiménez, P. (2021). Risk factors and leadership in a digitalized working world and their effects on employees' stress and resources: Web-based questionnaire study. *Journal of Medical Internet Research*, *23*(3), e24906. https://doi.org/10.2196/24906

Bregenzer, A., Milfelner, B., Šarotar Žižek, S., & Jiménez, P. (2020). Health-promoting leadership and leaders' listening skills have an impact on the employees' job satisfaction and turnover intention. *International Journal of Business Communication*, 232948842096370. https://doi.org/10.1177/2329488420963700

Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation-level theory: A Symposium* (pp. 287–302). Acad. Press.

Britt, T. W., Shen, W., Sinclair, R. R., Grossman, M. R., & Klieger, D. M. (2016). How much do we really know about employee resilience? *Industrial and Organizational Psychology*, *9*(2), 378–404. https://doi.org/10.1017/iop.2015.107

Britt, T. W., Shuffler, M. L., Pegram, R. L., Xoxakos, P., Rosopa, P., Hirsh, E., & Jackson, W. (2020). Job demands and resources among healthcare professionals during virus pandemics: A review and examination of fluctuations in mental health strain during COVID-19. *Applied Psychology: An*

International Review. Advance online publication. https://doi.org/10.1111/apps.12304

Brosschot, J. F., Gerin, W., & Thayer, J. F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research*, *60*(2), 113–124. https://doi.org/10.1016/j.jpsychores.2005.06.074

Brown, M. E., & Treviño, L. K. (2006). Ethical leadership: A review and future directions. *The Leadership Quarterly*, *17*(6), 595–616. https://doi.org/10.1016/j.leaqua.2006.10.004

Buhren, C. G., & Rolff, H.-G. (2002). Personalentwicklung in Schulen: Konzepte, Praxisbausteine, Methoden [Personnel development in schools: Concepts, practical modules, methods]. Beltz.

Arbeitsschutzgesetz, https://www.gesetze-im-internet.de/arbschg/ArbSchG.pdf (1996 & rev. last amended by Article 12 of the Act of November 22, 2021 - BGBl. I S. 4906).

Burns, J. M. (1978). *Leadership*. Harper & Row.

Byrne, A., Dionisi, A. M., Barling, J., Akers, A., Robertson, J., Lys, R., Wylie, J., & Dupré, K. (2014). The depleted leader: The influence of leaders' diminished psychological resources on leadership behaviors. *The Leadership Quarterly*, *25*(2), 344–357. https://doi.org/10.1016/j.leaqua.2013.09.003

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. D. Dunette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., pp. 687–732). Consulting Psychologists Press.

Cathcart, D., Jeska, S., Karnas, J., Miller, S. E., Pechacek, J., & Rheault, L. (2004). Span of control matters. *JONA: The Journal of Nursing Administration*, *34*(9), 395.

Chen, G., Ployhart, R. E., Thomas, H. C., Anderson, N., & Bliese, P. D. (2011). The power of momentum: A new model of dynamic relationships between job satisfaction change and turnover intentions. *Academy of Management Journal*, *54*(1), 159–181. https://doi.org/10.5465/amj.2011.59215089

Chen, S., Westman, M., & Hobfoll, S. E. (2015). The commerce and crossover of resources: Resource conservation in the service of resilience. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *31*(2), 95–105. https://doi.org/10.1002/smi.2574

Cheng, S., King, D. D., & Oswald, F. (2020). Understanding how resilience is measured in the organizational sciences. *Human Performance*, *33*(2-3), 130–163. https://doi.org/10.1080/08959285.2020.1744151

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indices for testing measurement invariance. *Structural Equation Modeling*, *9*(2), 233–255.

Chin, J. M.-C. (2007). Meta-analysis of transformational school leadership effects on school outcomes in Taiwan and the USA. *Asia Pacific Education Review*, *8*(2), 166–177. https://doi.org/10.1007/BF03029253

Collie, R. J. (2021). COVID-19 and teachers' somatic burden, stress, and emotional exhaustion: Examining the role of principal leadership and workplace buoyancy. *AERA Open*, *7*, 233285842098618. https://doi.org/10.1177/2332858420986187

Collins, M. D., & Jackson, C. J. (2015). A process model of self-regulation and leadership: How attentional resource capacity and negative emotions influence constructive and destructive leadership. *The Leadership Quarterly*, *26*(3), 386–401. https://doi.org/10.1016/j.leaqua.2015.02.005

Colquitt, J. A., & Zapata-Phelan, C. P. (2007). Trends in theory building and theory testing: A five-decade study of the academy of management journal. *Academy of Management Journal*, *50*(6), 1281–1303. https://doi.org/10.5465/amj.2007.28165855

Conley, K. M., Clark, M. A., Griek, O. H. V., & Mancini, J. A. (2016). Looking backward, moving forward: Exploring theoretical foundations for understanding employee resilience. *Industrial and Organizational Psychology*, *9*(2), 491–497. https://doi.org/10.1017/iop.2016.45

Cooper, B., Eva, N., Zarea Fazlelahi, F., Newman, A., Lee, A., & Obschonka, M. (2020). Addressing common method variance and endogeneity in vocational behavior research: A review of the literature and suggestions for future

research. *Journal of Vocational Behavior*, *121*, 103472. https://doi.org/10.1016/j.jvb.2020.103472

Corin, L., & Björk, L. (2016). Job demands and job resources in human service managerial work an external assessment through work content analysis. *Nordic Journal of Working Life Studies*, *6*(4), 3. https://doi.org/10.19154/njwls.v6i4.5610

Dadaczynski, K., Paulus, P., & Horstmann, D. (2019). The predictive value of individual and work-related resources for the health and work satisfaction of German school principals. *Health Education Journal*, *33*(2), 001789691986711. https://doi.org/10.1177/0017896919867118

Dansereau, F., Graen, G. B., & Haga, W. J. (1975). A vertical dyad linkage approach to leadership within formal organizations. *Organizational Behavior and Human Performance*, *13*(1), 46–78. https://doi.org/10.1016/0030-5073(75)90005-7

Darius, S., Bunzel, K., Ehms-Ciechanowicz, E., & Böckelmann, I. (2021). Psychische Gesundheit bei Referendaren [Mental health in novice teachers]. *Prävention Und Gesundheitsförderung [Prevention and Health Promotion]*, *16*(3), 215–224. https://doi.org/10.1007/s11553-020-00809-6

Day, D. V., Sin, H.-P., & Chen, T. T. (2004). Assessing the burdens of leadership: Effects of formal leadership roles on individual performance over time. *Personnel Psychology*, *57*(3), 573–605. https://doi.org/10.1111/j.1744-6570.2004.00001.x

de Cremer, D. (2003). Why inconsistent leadership is regarded as procedurally unfair: The importance of social self-esteem concerns. *European Journal of Social Psychology*, *33*(4), 535–550. https://doi.org/10.1002/ejsp.162

Della, L. J., DeJoy, D. M., Goetzel, R. Z., Ozminkowski, R. J., & Wilson, M. G. (2008). Assessing management support for worksite health promotion: Psychometric analysis of the leading by example (LBE) instrument. *American Journal of Health Promotion*, *22*(5), 359–367. https://doi.org/10.4278/ajhp.22.5.359

Della, L. J., DeJoy, D. M., Mitchell, S. G., Goetzel, R. Z., Roemer, E. C., & Wilson, M. G. (2010). Management support of workplace health promotion: Field test of the leading by example tool. *American Journal of Health*

Promotion, *25*(2), 138–146. https://doi.org/10.4278/ajhp.080930-QUAN-225

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

DeRue, D. S. (2011). Adaptive leadership theory: Leading and following as a complex adaptive process. *Research in Organizational Behavior*, *31*, 125–150. https://doi.org/10.1016/j.riob.2011.09.007

DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humpfrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytical test of their relative validity. *Personnel Psychology*, *64*(1), 7–52. https://doi.org/10.1111/j.1744-6570.2010.01201.x

Diener, E., & Diener, C. (1996). Most people are happy. *Psychological Science*, *7*(3), 181–185. https://doi.org/10.1111/j.1467-9280.1996.tb00354.x

Diener, E., & Larsen, R. J. (1984). Temporal stability and cross-situational consistency of affective, behavioral, and cognitive responses. *Journal of Personality and Social Psychology*, *47*(4), 871–883.

Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, *61*(4), 305–314. https://doi.org/10.1037/0003-066X.61.4.305

Dimoff, J. K., & Kelloway, E. K. (2019). With a little help from my boss: The impact of workplace mental health training on leader behaviors and employee resource utilization. *Journal of Occupational Health Psychology*, *24*(1), 4–19. https://doi.org/10.1037/ocp0000126

Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J [Jinyu] (2014). Leadership theory and research in the new millennium: Current theoretical trends and changing perspectives. *The Leadership Quarterly*, *25*(1), 36–62. https://doi.org/10.1016/j.leaqua.2013.11.005

Djourova, N. P., Rodríguez Molina, I., Tordera Santamatilde, N., & Abate, G. (2020). Self-efficacy and resilience: Mediating mechanisms in the relationship between the transformational leadership dimensions and Well-

Being. *Journal of Leadership & Organizational Studies*, *27*(3), 256–270. https://doi.org/10.1177/1548051819849002

Dóci, E., Hofmans, J., Nijs, S., & Judge, T. A. (2020). Leaders under pressure: Time pressure and state core self-evaluations as antecedents of transformational leadership behaviour. *European Journal of Work and Organizational Psychology*, *29*(4), 515–524. https://doi.org/10.1080/1359432X.2020.1714717

Dollard, M. F. (2019). The PSC-4: A short PSC tool. In M. F. Dollard, C. Dormann, & M. Awang Idris (Eds.), *Psychosocial safety climate: A new work stress theory* (pp. 385–409). Springer International Publishing. https://doi.org/10.1007/978-3-030-20319-1_16

Dollard, M. F., & Bailey, T. (2019). PSC in practice. In M. F. Dollard, C. Dormann, & M. Awang Idris (Eds.), *Psychosocial safety climate: A new work stress theory* (pp. 411–430). Springer International Publishing.

Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology*, *83*(3), 579–599. https://doi.org/10.1348/096317909X470690

Dollard, M. F., Dormann, C., & Awang Idris, M. (2019). Psychosocial safety climate: A new work stress theory and implications for method. In M. F. Dollard, C. Dormann, & M. Awang Idris (Eds.), *Psychosocial safety climate: A new work stress theory*. Springer International Publishing.

Dollard, M. F., Opie, T., Lenthall, S., Wakerman, J., Knight, S., Dunn, S., Rickard, G., & MacLeod, M. (2012). Psychosocial safety climate as an antecedent of work characteristics and psychological strain: A multilevel model. *Work & Stress*, *26*(4), 385–404. https://doi.org/10.1080/02678373.2012.734154

Dormann, C., Binnewies, C., Koch, A. R., van Ackeren, I., Marten, C., Preisendörfer, P., Schmidt, U., & Zlatkin-Troitschanskaia, O. (2016). Transferring best evidence into practice: assessment of evidence-based school management. *Journal for Educational Research Online*, *8*(3), 14–38.

Dormann, C., & Griffin, M. A. (2015). Optimal time lags in panel studies. *Psychological Methods*, *20*(4), 489–505. https://doi.org/10.1037/met0000041

Dormann, C., Owen, M., Dollard, M., & Guthier, C. (2018). Translating cross-lagged effects into incidence rates and risk ratios: The case of psychosocial safety climate and depression. *Work & Stress*, *32*(3), 248–261. https://doi.org/10.1080/02678373.2017.1395926

Dragoni, L. (2005). Understanding the emergence of state goal orientation in organizational work groups: The role of leadership and multilevel climate perceptions. *The Journal of Applied Psychology*, *90*(6), 1084–1095. https://doi.org/10.1037/0021-9010.90.6.1084

Dubs, R. (2005). Die Führung einer Schule: Leadership und Management [Leading a school: Leadership and management]. Steiner.

Dumdum, U. R., Lowe, K. B., & Avolio, B. J. (2013). A meta-analysis of transformational and transactional leadership correlates of effectiveness and satisfaction: An update and extension. In B. J. Avolio & F. J. Yammarino (Eds.), *Monographs in Leadership and Management. Transformational and Charismatic Leadership: The Road ahead 10th Anniversary Edition* (Vol. 5, pp. 39–70). Emerald Group Publishing Limited. https://doi.org/10.1108/S1479-357120130000005008

Dunkl, A., Jiménez, P., Šarotar Žižek, S., Milfelner, B., & Kallus, W. K. (2015). Similarities and differences of health-promoting leadership and transformational leadership. *Naše Gospodarstvo [Our Economy]*, *61*(4), 3–13. https://doi.org/10.1515/ngoe-2015-0013

Eberz, S., & Antoni, C. H. (2016). Das Systemisch-Salutogene Interaktions-Modell (SSIM) – Ein ganzheitlicher Ansatz zur Erklärung und Entwicklung gesundheitsförderlicher Interaktionsdynamiken zwischen Führungskräften und Mitarbeitenden [The systemic-salutogenic interaction model (SSIM) - A holistic approach to explaining and developing health-promoting interaction dynamics between managers and employees]. *Gruppe. Interaktion. Organisation. Zeitschrift Für Angewandte Organisationspsychologie (GIO) [Group. Interaction. Organization. Journal of Applied Organizational Psychology (GIO)]*, *47*(3), 265–273. https://doi.org/10.1007/s11612-016-0326-6

Eberz, S., & Antoni, C. H. (2018). Das TIMP-Inventar – Ein Beitrag zur ökonomischen Erfassung von Kern-Faktoren salutogener Führung [The TIMP inventory - A contribution to the economic assessment of core factors of salutogenic leadership]. *Gruppe. Interaktion. Organisation. Zeitschrift Für Angewandte Organisationspsychologie (GIO) [Group. Interaction. Organization. Journal of Applied Organizational Psychology (GIO)]*, *49*(1), 69–80. https://doi.org/10.1007/s11612-017-0384-4

Efimov, I., Harth, V., & Mache, S. (2021). Gesundheitsförderung in virtueller Teamarbeit durch gesundheitsorientierte Führung [Health promotion in virtual teamwork through health-oriented leadership]. *Prävention Und Gesundheitsförderung [Prevention and Health Promotion]*, *16*(3), 249–255. https://doi.org/10.1007/s11553-020-00819-4

Ellis, A. M., Bauer, T. N., Mansfield, L. R., Erdogan, B., Truxillo, D. M., & Simon, L. S. (2015). Navigating Uncharted Waters. *Journal of Management*, *41*(1), 203–235. https://doi.org/10.1177/0149206314557525

Estiri, M., Nargesian, A., Dastpish, F., & Sharifi, S. M. (2016). The impact of psychological capital on mental health among Iranian nurses: Considering the mediating role of job burnout. *SpringerPlus*, *5*(1), 1377. https://doi.org/10.1186/s40064-016-3099-z

Fairhurst, G. T., & Grant, D. (2010). The social construction of leadership: A sailing guide. *Management Communication Quarterly*, *24*(2), 171–210. https://doi.org/10.1177/0893318909359697

Feldhoff, T., Gromala, L., & Brüsemeister, T. (2014). Organisationales Lernen von Schulen im Kontext datenbasierter Steuerung [Organizational learning of schools in the context of data-based governance]. In H. G. Holstappels (Ed.), *Schulentwicklung und Schulwirksamkeit als Forschungsfeld: Theorieansätze und Forschungserkenntnisse zum schulischen Wandel [School development and school effectiveness as a field of research: Theoretical approaches and research findings on school change]* (pp. 241–258). Waxmann.

Feng, Z., & Savani, K. (2020). Covid-19 created a gender gap in perceived work productivity and job satisfaction: Implications for dual-career parents working from home. *Gender in Management: An International Journal*, *35*(7/8), 719–736. https://doi.org/10.1108/GM-07-2020-0202

Fernandez, A. A., & Shaw, G. P. (2020). Academic leadership in a time of crisis: The coronavirus and COVID-19. *Journal of Leadership Studies*, *14*(1), 39–45. https://doi.org/10.1002/jls.21684

Festinger, L. (2001). *A theory of cognitive dissonance* (Reissued by Stanford Univ. Press in 1962, renewed 1985 by author, [reprint]). Stanford Univ. Press.

Fiedler, F. E. (1978). The contingency model and the dynamics of the leadership process. *Advances in Experimental and Social Psychology*, *11*, 59–112. https://doi.org/10.1016/S0065-2601(08)60005-2

Fischer, T., Dietz, J., & Antonakis, J. (2017). Leadership process models: A review and synthesis. *Journal of Management*, *43*(6), 1726–1753. https://doi.org/10.1177/0149206316682830

Fisher, C. D. (1985). Social support and adjustment to work: A longitudinal study. *Journal of Management*, *11*(3), 39–53. https://doi.org/10.1177/014920638501100304

Fisher, D. M., & Law, R. D. (2021). How to choose a measure of resilience: An organizing framework for resilience measurement. *Applied Psychology*, *70*(2), 643–673. https://doi.org/10.1111/apps.12243

Fisher, D. M., Ragsdale, J. M., & Fisher, E. C. (2019). The importance of definitional and temporal issues in the study of resilience. *Applied Psychology*, *68*(4), 583–620. https://doi.org/10.1111/apps.12162

Forgeard, M., & Seligman, M. E. P. (2012). Seeing the glass half full: A review of the causes and consequences of optimism. *Pratiques Psychologiques [Psychological Practices]*, *18*(2), 107–120. https://doi.org/10.1016/j.prps.2012.02.002

Franke, F., Ducki, A., & Felfe, J. (2015). Gesundheitsförderliche Führung [Health-oriented leadership]. In J. Felfe (Ed.), Psychologie für das Personalmanagement: Vol. 27. Trends der psychologischen Führungsforschung [Psychology for human resource management: Vol. 27. Trends in psychological leadership research] (pp. 253–264). Hogrefe.

Franke, F., & Felfe, J. (2011). Diagnose gesundheitsförderlicher Führung: Das Instrument “Health-oriented Leadership” [Diagnosis of health-oriented leadership: The “Health-oriented Leadership” questionnaire]. In B. Badura,

A. Ducki, H. Schröder, J. Klose, & K. Macco (Eds.), *Fehlzeiten-Report 2011 [Absenteeism Report 2011]* (pp. 3–13). Springer.

Franke, F., Felfe, J., & Pundt, A. (2014). The impact of health-oriented leadership on follower health: Development and test of a new instrument measuring health-promoting leadership. *Zeitschrift für Personalforschung [Journal for Personnel Research]*, *28*(1-2), 139–161.

Franke, F., Vincent, S., & Felfe, J. (2011). Gesundheitsbezogene Führung [Health-related leadership]. In E. Bamberg, A. Ducki, & A.-M. Metz (Eds.), *Gesundheitsförderung und Gesundheitsmanagement in der Arbeitswelt: Ein Handbuch [Health promotion and health management in the workplace: A handbook]* (pp. 371–392). Hogrefe.

Frazier, M. L., & Jacezko, M. C. (2021). Leader machiavellianism as an antecedent to ethical leadership: the impact on follower psychological empowerment and work outcomes. *Journal of Leadership & Organizational Studies*, *28*(2), 154–168. https://doi.org/10.1177/1548051820971293

Frögéli, E., Rudman, A., & Gustavsson, P. (2019). The relationship between task mastery, role clarity, social acceptance, and stress: An intensive longitudinal study with a sample of newly registered nurses. *International Journal of Nursing Studies*, *91*, 60–69. https://doi.org/10.1016/j.ijnurstu.2018.10.007

Frögéli, E., Rudman, A., Lövgren, M., & Gustavsson, P. (2019). Problems with task mastery, social acceptance, and role clarity explain nurses' symptoms of burnout during the first professional years: A longitudinal study. *Work*, *62*(4), 573–584. https://doi.org/10.3233/WOR-192892

Gaab, J., Rohleder, N., Nater, U. M., & Ehlert, U. (2005). Psychological determinants of the cortisol stress response: The role of anticipatory cognitive appraisal. *Psychoneuroendocrinology*, *30*(6), 599–610. https://doi.org/10.1016/j.psyneuen.2005.02.001

Galatzer-Levy, I. R., Huang, S. H., & Bonanno, G. A. (2018). Trajectories of resilience and dysfunction following potential trauma: A review and statistical evaluation. *Clinical Psychology Review*, *63*, 41–55. https://doi.org/10.1016/j.cpr.2018.05.008

García-Carmona, M., Marín, M. D., & Aguayo, R. (2019). Burnout syndrome in secondary school teachers: a systematic review and meta-analysis. *Social*

Psychology of Education, *22*(1), 189–208. https://doi.org/10.1007/s11218-018-9471-9

Gieter, S. de, Hofmans, J., & Bakker, A. B. (2018). Need satisfaction at work, job strain, and performance: A diary study. *Journal of Occupational Health Psychology*, *23*(3), 361–372. https://doi.org/10.1037/ocp0000098

Gill, C., & Caza, A. (2018). An investigation of authentic leadership's individual and group influences on follower responses. *Journal of Management*, *44*(2), 530–554. https://doi.org/10.1177/0149206314566461

Gilstrap, C. A., Gilstrap, C. M., Holderby, K. N., & Valera, K. M. (2016). Sensegiving, leadership, and nonprofit crises: How nonprofit leaders make and give sense to organizational crisis. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *27*(6), 2787–2806. https://doi.org/10.1007/s11266-015-9648-1

Gooty, J., Gavin, M., Johnson, P. D., Frazier, M. L., & Snow, D. B. (2009). In the eyes of the beholder: Transformational leadership, positive psychological capital, and performance. *Journal of Leadership & Organizational Studies*, *15*(4), 353–367. https://doi.org/10.1177/1548051809332021

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, *6*(2), 219–247. https://doi.org/10.1016/1048-9843(95)90036-5

Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and Teacher Education*, *24*(5), 1349–1363. https://doi.org/10.1016/j.tate.2007.06.005

Gregersen, S., Kuhnert, S., Zimber, A., & Nienhaus, A. (2011). Führungsverhalten und Gesundheit - Zum Stand der Forschung [Leadership behaviour and health - current research state]. *Gesundheitswesen (Bundesverband der Ärzte des Öffentlichen Gesundheitsdienstes Deutschland) [Public Health Service (Federal Association of Public Health Service Physicians Germany)]*, *73*(1), 3–12. https://doi.org/10.1055/s-0029-1246180

Gruman, J. A., & Saks, A. M. (2013). Organizational socialization and newcomers' psychological capital and well-being. In A. B. Bakker (Ed.), *Advances in*

positive organizational psychology (Vol. 1, pp. 211–236). Emerald Group Publishing Limited. https://doi.org/10.1108/S2046-410X(2013)0000001012

Gruman, J. A., Saks, A. M., & Zweig, D. I. (2006). Organizational socialization tactics and newcomer proactive behaviors: An integrative study. *Journal of Vocational Behavior*, *69*(1), 90–104. https://doi.org/10.1016/j.jvb.2006.03.001

Gülşen, C., & Gülenay, G. B. (2014). The principal and healthy school climate. *Social Behavior and Personality: An International Journal*, *42*(1), 93S-100S. https://doi.org/10.2224/sbp.2014.42.0.S93

Gumus, S., Bellibas, M. S., Esen, M., & Gumus, E. (2018). A systematic review of studies on leadership models in educational research from 1980 to 2014. *Educational Management Administration & Leadership*, *46*(1), 25–48. https://doi.org/10.1177/1741143216659296

Güntner, A. V., Klasmeier, K. N., Klonek, F. E., & Kauffeld, S. (2021). The power of followers that do not follow: Investigating the effects of follower resistance, leader implicit followership theories and leader negative affect on the emergence of destructive leader behavior. *Journal of Leadership & Organizational Studies*, *28*(3), 349–365. https://doi.org/10.1177/15480518211012408

Gurt, J., & Elke, G. (2009). Health promoting leadership: The mediating role of an organizational health culture. In B.-T. Karsh (Ed.), *Proceedings of the International Conference on Ergonomics and Health Aspects of Work with Computers* (Vol. 5624, pp. 29–38). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-02731-4_4

Gurt, J., Schwennen, C., & Elke, G. (2011). Health-specific leadership: Is there an association between leader consideration for the health of employees and their strain and well-being? *Work & Stress*, *25*(2), 108–127. https://doi.org/10.1080/02678373.2011.595947

Gyu Park, J., Sik Kim, J., Yoon, S. W., & Joo, B.-K. (2017). The effects of empowering leadership on psychological well-being and job engagement. *Leadership & Organization Development Journal*, *38*(3), 350–367. https://doi.org/10.1108/LODJ-08-2015-0182

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress*, *22*(3), 224–241. https://doi.org/10.1080/02678370802379432

Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR": Understanding the role of resources in conservation of resources theory. *Journal of Management*, *40*(5), 1334–1364. https://doi.org/10.1177/0149206314527130

Hallinger, P., & Kovačević, J. (2019). A bibliometric review of research on educational administration: Science mapping the literature, 1960 to 2018. *Review of Educational Research*, *89*(3), 335–369. https://doi.org/10.3102/0034654319830380

Hambrick, D. C., Finkelstein, Sydney, & Mooney, A. C. (2005). Executive job demands: New insights for explaining strategic decisions and leader behaviors. *Academy of Management Review*, *30*(3), 472–491.

Han, J., Yin, H., Wang, J., & Bai, Y. (2020). Challenge job demands and job resources to university teacher well-being: the mediation of teacher efficacy. *Studies in Higher Education*, *45*(8), 1771–1785. https://doi.org/10.1080/03075079.2019.1594180

Harazd, B., Gieske, M., & Rolff, H.-G. (2009). Gesundheitsmanagement in der Schule: Lehrergesundheit als neue Aufgabe der Schulleitung [Health management in schools: Teacher health as a new task of school principals]. Eine Veröffentlichung der Dortmunder Akademie für Pädagogische Führungskräfte (DAPF) der Technischen Universität Dortmund [A publication of the Dortmund Academy for Pedagogical Leadership (DAPF) of the Technical University Dortmund]. Schule und Gesundheit [School and Health]. Wolters Kluwer.

Harazd, B., & van Ophuysen, S. (2011). Transformationale Führung in Schulen: Der Einsatz des "Multifactor Leadership Questionnaire" (MLQ 5 x Short) [Transformational leadership in schools: The use of the multifactor leadership questionnaire (MLQ 5 x Short)]. *Journal for Educational Research Online*, *3*, 141–167.

Harland, L., Harrison, W., Jones, J. R., & Reiter-Palmon, R. (2005). Leadership behaviors and subordinate resilience. *Journal of Leadership & Organizational Studies*, *11*(2), 2–14.

Harms, P. D., Credé, M., Tynan, M., Leon, M., & Jeung, W. (2017). Leadership and stress: A meta-analytic review. *The Leadership Quarterly*, *28*(1), 178–194. https://doi.org/10.1016/j.leaqua.2016.10.006

Harms, P. D., Vanhove, A., & Luthans, F. (2017). Positive projections and health: An initial validation of the implicit psychological capital health measure. *Applied Psychology*, *66*(1), 78–102. https://doi.org/10.1111/apps.12077

Harris, A., & Jones, M. (2020). COVID 19 – school leadership in disruptive times. *School Leadership & Management*, *40*(4), 243–247. https://doi.org/10.1080/13632434.2020.1811479

Hartmann, S., Weiss, M., Newman, A., & Hoegl, M. (2020). Resilience in the workplace: A multilevel review and synthesis. *Applied Psychology: An International Review*, *69*(3), 913–959. https://doi.org/10.1111/apps.12191

Helmreich, I., Kunzler, A., Chmitorz, A., König, J., Binder, H., Wessa, M., & Lieb, K. (2017). Psychological interventions for resilience enhancement in adults. *Cochrane Database of Systematic Reviews.* Advance online publication. https://doi.org/10.1002/14651858.CD012527

Hill, A. D., Johnson, S. G., Greco, L. M., O'Boyle, E. H., & Walter, S. L. (2021). Endogeneity: A review and agenda for the methodology-practice divide affecting micro and macro research. *Journal of Management*, *47*(1), 105–143. https://doi.org/10.1177/0149206320960533

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513–524.

Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress, health, and resilience. In S. Folkman (Ed.), *Oxford library of psychology. The Oxford handbook of stress, health, and coping.* Oxford University Press.

Hobfoll, S. E., & Freedy, J. (2018). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 115–129). Routledge.

Hobfoll, S. E., Halbesleben, J. R. B., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640

Hobfoll, S. E., Stevens, N. R., & Zalta, A. K. (2015). Expanding the science of resilience: Conserving resources in the aid of adaptation. *Psychological Inquiry*, *26*(2), 174–180. https://doi.org/10.1080/1047840X.2015.1002377

Hoch, J. E., Bommer, W. H., Dulebohn, J. H., & Wu, D. (2018). Do ethical, authentic, and servant leadership explain variance above and beyond transformational leadership? A meta-analysis. *Journal of Management*, *44*(2), 501–529. https://doi.org/10.1177/0149206316665461

Hoogh, A. de, Hartog, D. den, Koopman, P., Thierry, H., van den Berg, P., van der Weide, J., & Wilderom, C. (2004). Charismatic leadership, environmental dynamism, and performance. *European Journal of Work and Organizational Psychology*, *13*(4), 447–471. https://doi.org/10.1080/13594320444000164

Hopson, B., & Adams, J. (1976). Towards an understanding of transition: Defining some boundaries of transition dynamics. In J. Adams, J. Hayes, & B. Hopson (Eds.), *Transitions. Understanding and managing personal change.* (pp. 3–25). Martin Robertson.

Hoption, C. (2016). It does not add up: Comparing episodic and general leadership ratings. *Leadership*, *12*(4), 491–503. https://doi.org/10.1177/1742715015575583

Horstmann, D. (2018). Enhancing employee self-care. *European Journal of Health Psychology*, *25*(3), 96–106. https://doi.org/10.1027/2512-8442/a000014

Horstmann, D., & Remdisch, S. (2016). Gesundheitsorientierte Führung in der Altenpflege [Health-oriented leadership in geriatric care]. *Zeitschrift Für Arbeits- Und Organisationspsychologie A&O [Journal of Industrial and Organizational Psychology]*, *60*(4), 199–211. https://doi.org/10.1026/0932-4089/a000223

Horstmann, D., & Remdisch, S. (2019). Drivers and barriers in the practice of health-specific leadership: A qualitative study in healthcare. *Work*, *64*(2), 311–321. https://doi.org/10.3233/WOR-192994

Hu, J [Jia], He, W., & Zhou, K. (2020). The mind, the heart, and the leader in times of crisis: How and when COVID-19-triggered mortality salience relates to state anxiety, job engagement, and prosocial behavior. *The Journal of Applied Psychology*, *105*(11), 1218–1233. https://doi.org/10.1037/apl0000620

Huang, J., Wang, Y [Yansong], & You, X. (2016). The job demands–resources model and job burnout: The mediating role of personal resources. *Current Psychology*, *35*(4), 562–569. https://doi.org/10.1007/s12144-015-9321-2

Huber, S. G. (1999). Effectiveness & Improvement: Wirksamkeit und Verbesserung von Schule - eine Zusammenschau [Effectiveness & improvement: school effectiveness and improvement - a synopsis]. *Schul-Management [School Management]*, *30*(5), 8–18.

Huber, S. G. (2011). Research on principals in the German speaking countries. In O. Johansson (Ed.), Vetenskapsrådets rapportserie [The Swedish Research Council's report series]: 2011:4. Rektor - en forskningsöversikt 2000-2010 [Rector - a research review 2000-2010]: Del I [Part I]: Forskning om rektor - en översikt av svensk forskning 2000-2010 [Research on the Rector - an overview of Swedish research 2000-2010]; Del II [Part II]: Research on school leaders - with Nordic and European reviews 2000-2010 (pp. 230–254). Vetenskapsrådet [The Swedish Research Council].

Hunter, S. T., Bedell-Avers, K. E., & Mumford, M. D. (2007). The typical leadership study: Assumptions, implications, and potential remedies. *The Leadership Quarterly*, *18*(5), 435–446. https://doi.org/10.1016/j.leaqua.2007.07.001

Hunter, S. T., Tate, B. W., Dzieweczynski, J. L., & Bedell-Avers, K. E. (2011). Leaders make mistakes: A multilevel consideration of why. *The Leadership Quarterly*, *22*(2), 239–258. https://doi.org/10.1016/j.leaqua.2011.02.001

Huyghebaert, T., Gillet, N., Fernet, C., Lahiani, F.-J., & Fouquereau, E. (2018). Leveraging psychosocial safety climate to prevent ill-being: The mediating

role of psychological need thwarting. *Journal of Vocational Behavior*, *107*, 111–125. https://doi.org/10.1016/j.jvb.2018.03.010

Idris, M. A., Dollard, M. F., Coward, J., & Dormann, C. (2012). Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health. *Safety Science*, *50*(1), 19–28. https://doi.org/10.1016/j.ssci.2011.06.005

Idris, M. A., Dollard, M. F., & Yulita (2014). Psychosocial safety climate, emotional demands, burnout, and depression: A longitudinal multilevel study in the Malaysian private sector. *Journal of Occupational Health Psychology*, *19*(3), 291–302. https://doi.org/10.1037/a0036599

Inceoglu, I., Thomas, G., Chu, C., Plans, D., & Gerbasi, A. (2018). Leadership behavior and employee well-being: An integrated review and a future research agenda. *The Leadership Quarterly*, *29*(1), 179–202. https://doi.org/10.1016/j.leaqua.2017.12.006

IPBES. (2020). *IPBES workshop on biodiversity and pandemics: Workshop report.* Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. https://ipbes.net/sites/default/files/2020-10/20201028%20IPBES%20Pandemics%20Workshop%20Report%20Plain%20Text%20Final_0.pdf

Itzkovich, Y., Heilbrunn, S., & Aleksic, A. (2020). Full range indeed? The forgotten dark side of leadership. *Journal of Management Development*, *39*(7/8), 851–868. https://doi.org/10.1108/JMD-09-2019-0401

Jiménez, P., Bregenzer, A., Kallus, W. K., Fruhwirth, B., & Wagner-Hartl, V. (2017). Enhancing resources at the workplace with health-promoting leadership. *International Journal of Environmental Research and Public Health*, *14*(10). https://doi.org/10.3390/ijerph14101264

Jiménez, P., Winkler, B., & Bregenzer, A. (2017). Developing sustainable workplaces with leadership: Feedback about organizational working conditions to support leaders in health-promoting behavior. *Sustainability*, *9*(11), 1944. https://doi.org/10.3390/su9111944

Jokisaari, M. (2013). The role of leader–member and social network relations in newcomers' role performance. *Journal of Vocational Behavior*, *82*(2), 96–104. https://doi.org/10.1016/j.jvb.2013.01.002

Jones, M. C., Smith, K., & Johnston, D. W. (2005). Exploring the Michigan model: The relationship of personality, managerial support and organizational structure with health outcomes in entrants to the healthcare environment. *Work & Stress*, *19*(1), 1–22. https://doi.org/10.1080/02678370500065325

Jonge, J. de, & Dormann, C. (2003). The DISC Model: Demand-induced strain compensation mechanisms in job stress. In M. F. Dollard, H. R. Winefield, & A. H. Winefield (Eds.), *Occupational Stress in the Service Professions.* CRC Press.

Jonge, J. de, & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology*, *91*(6), 1359–1374. https://doi.org/10.1037/0021-9010.91.5.1359

Joseph-Richard, P., Edwards, G., & Hazlett, S.-A. (2021). Leadership development outcomes research and the need for a time-sensitive approach. *Human Resource Development International*, *24*(2), 173–199. https://doi.org/10.1080/13678868.2020.1815155

Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology*, *89*(1), 36–51. https://doi.org/10.1037/0021-9010.89.1.36

Jung, T., & Wickrama, K. A. S. (2008). An introduction to latent class growth analysis and growth mixture modeling. *Social and Personality Psychology Compass*, *2*(1), 302–317. https://doi.org/10.1111/j.1751-9004.2007.00054.x

Kalisch, R., Baker, D. G., Basten, U., Boks, M. P., Bonanno, G. A., Brummelman, E., Chmitorz, A., Fernàndez, G., Fiebach, C. J., Galatzer-Levy, I. R., Geuze, E., Groppa, S., Helmreich, I., Hendler, T., Hermans, E. J., Jovanovic, T., Kubiak, T., Lieb, K., Lutz, B., . . . Kleim, B. (2017). The resilience framework as a strategy to combat stress-related disorders. *Nature Human Behaviour*, *1*(11), 784–790. https://doi.org/10.1038/s41562-017-0200-8

Kalisch, R., Müller, M. B., & Tüscher, O. (2015). A conceptual framework for the neurobiological study of resilience. *The Behavioral and Brain Sciences*, *38*, e92. https://doi.org/10.1017/S0140525X1400082X

Kaluza, A. J., Boer, D., Buengeler, C., & van Dick, R. (2020). Leadership behaviour and leader self-reported well-being: A review, integration and meta-analytic

examination. *Work & Stress*, *34*(1), 34–56. https://doi.org/10.1080/02678373.2019.1617369

Kaluza, A. J., Schuh, S. C., Kern, M., Xin, K., & Dick, R. (2020). How do leaders' perceptions of organizational health climate shape employee exhaustion and engagement? Toward a cascading-effects model. *Human Resource Management*, *59*(4), 359–377. https://doi.org/10.1002/hrm.22000

Kaluza, A. J., Weber, F., van Dick, R., & Junker, N. M. (2021). When and how health-oriented leadership relates to employee well-being—The role of expectations, self-care, and LMX. *Journal of Applied Social Psychology*, *51*(4), 404–424. https://doi.org/10.1111/jasp.12744

Kammeyer-Mueller, J., Wanberg, C., Rubenstein, A., & Song, Z. (2013). Support, undermining, and newcomer socialization: Fitting in during the first 90 days. *Academy of Management Journal*, *56*(4), 1104–1124. https://doi.org/10.5465/amj.2010.0791

Karatepe, O. M., & Talebzadeh, N. (2016). An empirical investigation of psychological capital among flight attendants. *Journal of Air Transport Management*, *55*, 193–202. https://doi.org/10.1016/j.jairtraman.2016.06.001

Kelloway, E. K., & Barling, J. (2010). Leadership development as an intervention in occupational health psychology. *Work & Stress*, *24*(3), 260–279. https://doi.org/10.1080/02678373.2010.518441

Kerschreiter, R., Heinitz, K., May, D., & Wesche, J. S. (2018). Führungsdiagnostik, Führungsinstrumente und Führungskräfteentwicklung [Leadership diagnostics, leadership tools and leadership development]. In S. Greif & K.-C. Hamborg (Eds.), *Methoden der Arbeits-, Organisations- und Wirtschaftspsychologie [Methods of work, organizational and business psychology]* (1st ed., pp. 215–273). Hogrefe.

Kim, M., & Beehr, T. A. (2018). Challenge and hindrance demands lead to employees' health and behaviours through intrinsic motivation. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *34*(3), 367–378. https://doi.org/10.1002/smi.2796

King, D. D., Newman, A., & Luthans, F. (2016). Not if, but when we need resilience in the workplace. *Journal of Organizational Behavior*, *37*(5), 782–786. https://doi.org/10.1002/job.2063

Kirkpatrick, D. L. (1970). Evaluation of training. In P. L. Browning (Ed.), *Evaluation of short-term training in rehabilitation: Oregon studies in the rehabilitation of the retarded* (pp. 35–56). University of Oregon.

Klebe, L., Felfe, J., & Klug, K. (2021a). Healthy leadership in turbulent times: The effectiveness of health-oriented leadership in crisis. *British Journal of Management*, *32*(4), 1203–1218. https://doi.org/10.1111/1467-8551.12498

Klebe, L., Felfe, J., & Klug, K. (2021b). Mission impossible? Effects of crisis, leader and follower strain on health-oriented leadership. *European Management Journal.* Advance online publication. https://doi.org/10.1016/j.emj.2021.07.001

Klebe, L., Klug, K., & Felfe, J. (2021). The show must go on: The effects of crisis on health-oriented leadership and follower exhaustion during the COVID-19 pandemic. *Zeitschrift Für Arbeits- Und Organisationspsychologie A&O [Journal of Industrial and Organizational Psychology]*, *65*(4), 231–243. https://doi.org/10.1026/0932-4089/a000369

Klein, H. E. (2008). Was Schulleiter als Führungskräfte brauchen: Eine Bestandsaufnahme von Aufgaben, Kompetenzprofilen und Qualifizierungen von Schulleitern in den Ländern der Bundesrepublik Deutschland [What school principals need as leaders: An inventory of tasks, competence profiles, and qualifications of school principals in the states of the federal republic of germany]. Köln. Institut der deutschen Wirtschaft (Institute of the German Economy). https://www.schulewirtschaft-niedersachsen.de/wp-content/uploads/2020/12/Was_Schulleiter_als_Fuehrungskraefte_brauchen_-_eine_Bestandsaufnahme.pdf

Klein, H. J., & Heuser, A. E. (2008). The learning of socialization content: A framework for researching orientating practices. *Personnel and Human Resources Management*, *27*, 279–336.

Klemme Larson, R. E., & Bell, A. A. (2013). Newcomer adjustment among recent college graduates: An integrative literature review. *Human Resource*

Development Review, *12*(3), 284–307. https://doi.org/10.1177/1534484313475869

Klug, K., & Felfe, J. (2019). A person-oriented approach to health-oriented leadership – state of the art and a research agenda. In D. Alewell & W. Matiaske (Eds.), *Standards guter Arbeit [Standards of good work]* (pp. 17–38). Nomos Verlagsgesellschaft mbH & Co. KG. https://doi.org/10.5771/9783845299310-17

Klug, K., Felfe, J., & Krick, A. (2019). Caring for oneself or for others? How consistent and inconsistent profiles of health-oriented leadership are related to follower strain and health. *Frontiers in Psychology*, *10*, 2456. https://doi.org/10.3389/fpsyg.2019.02456

Klusmann, U., Kunter, M., Trautwein, U., Lüdtke, O., & Baumert, J. (2008). Engagement and emotional exhaustion in teachers: Does the school context make a difference? *Applied Psychology*, *57*(s1), 127–151. https://doi.org/10.1111/j.1464-0597.2008.00358.x

Klusmann, U., Kunter, M., Voss, T., & Baumert, J. (2012). Berufliche Beanspruchung angehender Lehrkräfte: Die Effekte von Persönlichkeit, pädagogischer Vorerfahrung und professioneller Kompetenz [Professional stress of prospective teachers: The effects of personality, prior pedagogical experience, and professional competence]. *Zeitschrift Für Pädagogische Psychologie [Journal of Educational Psychology]*, *26*(4), 275–290. https://doi.org/10.1024/1010-0652/a000078

Knudsen, H. K., Ducharme, L. J., & Roman, P. M. (2009). Turnover intention and emotional exhaustion “at the top”: Adapting the job demands–resources model to leaders of addiction treatment organizations. *Journal of Occupational Health Psychology*, *14*(1), 84–95. https://doi.org/10.1037/a0013822

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., Vet Henrica, C. W. de, & van der Beek, A. J. (2011). Conceptual frameworks of individual work performance: A systematic review. *Journal of Occupational and Environmental Medicine*, *53*(8), 856–866. https://doi.org/10.1097/JOM.0b013e318226a763

Köppe, C., Kammerhoff, J., & Schütz, A. (2018). Leader-follower crossover: Exhaustion predicts somatic complaints via StaffCare behavior. *Journal of Managerial Psychology*, *33*(3), 297–310. https://doi.org/10.1108/JMP-10-2017-0367

Kotterman, J. (2006). Leadership versus management: What's the difference? *The Journal for Quality and Participation*, *29*(2), 13–17.

Kraft, M., Simon, N. S., & Lyon, M. A. (2020). *Sustaining a sense of success: The importance of teacher working conditions during the COVID-19 pandemic* (EdWorkingPaper 20-279). Annenberg Institute at Brown University. https://doi.org/10.26300/35nj-v890

Kramer, M. W., & Crespy, D. A. (2011). Communicating collaborative leadership. *The Leadership Quarterly*, *22*(5), 1024–1037. https://doi.org/10.1016/j.leaqua.2011.07.021

Kranabetter, C., & Niessen, C. (2017). Managers as role models for health: Moderators of the relationship of transformational leadership with employee exhaustion and cynicism. *Journal of Occupational Health Psychology*, *22*(4), 492–502. https://doi.org/10.1037/ocp0000044

Krasikova, D. V., Lester, P. B., & Harms, P. D. (2015). Effects of psychological capital on mental health and substance abuse. *Journal of Leadership & Organizational Studies*, *22*(3), 280–291. https://doi.org/10.1177/1548051815585853

Krause, A. (2004). Fragebogen zur Arbeitssituation an Schulen (FASS): Unveröffentlichte Dokumentation zum Forschungsprojekt psychische Belastungen im Unterricht [Questionnaire on the work situation at schools - Unpublished documentation on the research project psychological stress in the classroom]. Universität Freiburg.

Krick, A., & Felfe, J. (2020). Die gesundheitsförderliche Selbstführungskompetenz – das Stärken- und Ressourcentraining [The health promoting self-leadership competence - the strengths and resources training]. *Organisationsberatung, Supervision, Coaching [Organizational Consulting, Supervision, Coaching]*, *27*(1), 51–64. https://doi.org/10.1007/s11613-020-00637-9

Krick, A., Felfe, J., & Pischel, S. (2021). Health-oriented leadership as a job resource: Can staff care buffer the effects of job demands on employee health and job satisfaction? *Journal of Managerial Psychology*, *ahead-of-print*. https://doi.org/10.1108/JMP-02-2021-0067

Kronenwett, M., & Rigotti, T. (2020). Subjective achievement experiences at work and reduced depressivity: the mediating role of psychological need satisfaction. *European Journal of Work and Organizational Psychology*, 1–13. https://doi.org/10.1080/1359432X.2020.1862086

Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, job well-being, and health effects - a systematic review and a meta-analysis. *Journal of Occupational and Environmental Medicine*, *50*(8), 904–915. https://doi.org/10.1097/JOM.0b013e31817e918d

Lapointe, É., & Vandenberghe, C. (2018). Trust in the supervisor and the development of employees' social capital during organizational entry: a conservation of resources approach. *The International Journal of Human Resource Management*, *29*(17), 2503–2523. https://doi.org/10.1080/09585192.2016.1244097

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Leana, C. R. (1986). Predictors and consequences of delegation. *Academy of Management Journal*, *29*(4), 754–774.

Lee, A. M., Wong, J. G. W. S., McAlonan, G. M., Cheung, V., Cheung, C., Sham, P. C., Chu, C.-M., Wong, P.-C., Tsang, K. W. T., & Chua, S. E. (2007). Stress and psychological distress among SARS survivors 1 year after the outbreak. *Canadian Journal of Psychiatry*, *52*(4), 233–240. https://doi.org/10.1177/070674370705200405

Lee, S. A., Jobe, M. C., Mathis, A. A., & Gibbons, J. A. (2020). Incremental validity of coronaphobia: Coronavirus anxiety explains depression, generalized anxiety, and death anxiety. *Journal of Anxiety Disorders*, *74*, 102268. https://doi.org/10.1016/j.janxdis.2020.102268

Leithwood, K. A., & Poplin, M. S. (1992). The move toward transformational leadership. *Educational Leadership*, *49*(5), 8–12.

Leonard, L. J., & Leonard, P. E. (1999). Reculturing for collaboration and leadership. *The Journal of Educational Research*, *92*(4), 237–242.

Lesener, T., Gusy, B., & Wolter, C. (2019). The job demands–resources model: A meta-analytic review of longitudinal studies. *Work & Stress*, *33*(1), 76–103. https://doi.org/10.1080/02678373.2018.1529065

Levecque, K., Anseel, F., Beuckelaer, A. de, van der Heyden, J., & Gisle, L. (2017). Work organization and mental health problems in PhD students. *Research Policy*, *46*(4), 868–879. https://doi.org/10.1016/j.respol.2017.02.008

Li, Y., Wang, Z., Yang, L.-Q., & Liu, S. (2016). The crossover of psychological distress from leaders to subordinates in teams: The role of abusive supervision, psychological capital, and team performance. *Journal of Occupational Health Psychology*, *21*(2), 142–153. https://doi.org/10.1037/a0039960

Liden, R. C., Wayne, S. J., Meuser, J. D., Hu, J [Jia], Wu, J., & Liao, C. (2015). Servant leadership: Validation of a short form of the SL-28. *The Leadership Quarterly*, *26*(2), 254–269. https://doi.org/10.1016/j.leaqua.2014.12.002

Likert, R. (1961). *New patterns of management*. McGraw-Hill.

Lin, T.-L. (2013). The relationship among perceived organization support, psychological capital and employees' job burnout in international tourist hotels. *Life Science Journal*, *10*(3), 2104–2112.

Ling, S. L. M., & Ibrahim, M. S. B. (2013). Transformational leadership and teacher commitment in secondary schools of Sarawak. *International Journal of Independent Research and Studies*, *2*(2), 51–65.

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, *19*(1), 4–30. https://doi.org/10.1111/ijmr.12076

Lovelace, J. B., Neely, B. H., Allen, J. B., & Hunter, S. T. (2019). Charismatic, ideological, & pragmatic (CIP) model of leadership: A critical review and agenda for future research. *The Leadership Quarterly*, *30*(1), 96–110. https://doi.org/10.1016/j.leaqua.2018.08.001

Lovelace, K. J., Manz, C. C., & Alves, J. C. (2007). Work stress and leadership development: The role of self-leadership, shared leadership, physical fitness and flow in managing demands and increasing job control. *Human Resource Management Review*, *17*(4), 374–387. https://doi.org/10.1016/j.hrmr.2007.08.001

Lucas, R. E. (2007). Adaptation and the set-point model of subjective well-being: Does happiness change after major life events? *Current Directions in Psychological Science*, *16*(2), 75–79.

Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality and Social Psychology*, *102*(3), 592–615. https://doi.org/10.1037/a0025948.

Lupșa, D., Vîrga, D., Maricuțoiu, L. P., & Rusu, A. (2020). Increasing psychological capital: A pre-registered meta-analysis of controlled interventions. *Applied Psychology*, *69*(4), 1506–1556. https://doi.org/10.1111/apps.12219

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, *23*(6), 695–706. https://doi.org/10.1002/job.165

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior*, *27*(3), 387–393. https://doi.org/10.1002/job.373

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive Psychological Capital: Measurement and Relationship with Performance and Satisfaction. *Personnel Psychology*, *60*, 541–572.

Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate—employee performance relationship. *Journal of Organizational Behavior*, *29*(2), 219–238. https://doi.org/10.1002/job.507

Luthans, F., Youssef, C. M., & Avolio, B. J.. (2007). *Psychological capital: Developing the human competitive edge*. Oxford University Press.

Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and*

Organizational Behavior, *4*(1), 339–366. https://doi.org/10.1146/annurev-orgpsych-032516-113324

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*(3), 543–562.

Lyubomirsky, S. (2011). Hedonic adaptation to positive and negative experiences. In S. Folkman (Ed.), *Oxford library of psychology. The Oxford handbook of stress, health, and coping* (pp. 200–224). Oxford Univ. Press.

Maas, J., Schoch, S., Scholz, U., Rackow, P., Schüler, J., Wegner, M., & Keller, R. (2021). Teachers' perceived time pressure, emotional exhaustion and the role of social support from the school principal. *Social Psychology of Education*, *24*(2), 441–464. https://doi.org/10.1007/s11218-020-09605-8

Madrid, H. P., Diaz, M. T., Leka, S., Leiva, P. I., & Barros, E. (2018). A finer grained approach to psychological capital and work performance. *Journal of Business and Psychology*, *33*(4), 461–477. https://doi.org/10.1007/s10869-017-9503-z

Maheshwari, G. (2021). Influence of teacher-perceived transformational and transactional school leadership on teachers' job satisfaction and performance: A case of Vietnam. *Leadership and Policy in Schools*, 1–15. https://doi.org/10.1080/15700763.2020.1866020

Mansfield, C. F. (2021). *Cultivating teacher resilience*. Springer Nature. https://doi.org/10.1007/978-981-15-5963-1

Martin, R., Epitropaki, O., Erdogan, B., & Thomas, G. (2019). Relationship-based leadership: Current trends and future prospects. *Journal of Occupational and Organizational Psychology*, *92*(3), 465–474. https://doi.org/10.1111/joop.12286

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach Burnout Inventory* (3rd ed.). Consulting Psychologists Press.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, *93*(3), 498–512. https://doi.org/10.1037/0021-9010.93.3.498

Mason, M. (2000). Teachers as critical mediators of knowledge. *Journal of Philosophy of Education*, *34*(2), 343–352.

Masten, A. S. (2001). Ordinary magic. Resilience processes in development. *The American Psychologist*, *56*(3), 227–238. https://doi.org/10.1037//0003-066X.56.3.227

Mawritz, M. B., Folger, R., & Latham, G. P. (2014). Supervisors' exceedingly difficult goals and abusive supervision: The mediating effects of hindrance stress, anger, and anxiety. *Journal of Organizational Behavior*, *35*(3), 358–372. https://doi.org/10.1002/job.1879

Mazzetti, G., Guglielmi, D., Chiesa, R., & Mariani, M. G. (2016). Happy employees in a resourceful workplace: just a direct relationship? *Career Development International*, *21*(7), 682–696. https://doi.org/10.1108/CDI-03-2016-0035

Mazzetti, G., Vignoli, M., Petruzziello, G., & Palareti, L. (2018). The hardier you are, the healthier you become. May hardiness and engagement explain the relationship between leadership and employees' health? *Frontiers in Psychology*, *9*, 2784. https://doi.org/10.3389/fpsyg.2018.02784

McLarnon, M. J. W., & O'Neill, T. A. (2018). Extensions of auxiliary variable approaches for the investigation of mediation, moderation, and conditional effects in mixture models. *Organizational Research Methods*, *21*(4), 955–982. https://doi.org/10.1177/1094428118770731

McMurray, A. J., Pirola-Merlo, A., Sarros, J. C., & Islam, M. M. (2010). Leadership, climate, psychological capital, commitment, and wellbeing in a non-profit organization. *Leadership & Organization Development Journal*, *31*(5), 436–457. https://doi.org/10.1108/01437731011056452

Michel, J. S., & LeBreton, J. M. (2011). Leadership coherence: An application of personality coherence theory to the study of leadership. *Personality and Individual Differences*, *50*(5), 688–694. https://doi.org/10.1016/j.paid.2010.12.018

Mohr, G., Rigotti, T., & Müller, A. (2005). Irritation - ein Instrument zur Erfassung psychischer Beanspruchung im Arbeitskontext. Skalen- und Itemparameter aus 15 Studien [Irritation - an instrument for the assessment of psychological stress in the work context. Scale and item parameters from 15 studies].

Zeitschrift Für Arbeits- und Organisationspsychologie A&O [Journal of Industrial and Organizational Psychology], *49*(1), 44–48. https://doi.org/10.1026/0932-4089.49.1.44

Mohr, G., & Wolfram, H.-J. (2010). Stress among managers: The importance of dynamic tasks, predictability, and social support in unpredictable times. *Journal of Occupational Health Psychology*, *15*(2), 167–179. https://doi.org/10.1037/a0018892

Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2017). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior*, *38*(3), 327–350. https://doi.org/10.1002/job.2124

Morgeson, F. P., & Humphrey, S. E. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, *91*(6), 1321–1339. https://doi.org/10.1037/0021-9010.91.6.1321

Morin, A. J. S., Bujacz, A., & Gagné, M. (2018). Person-centered methodologies in the organizational science. *Organizational Research Methods*, *21*(4), 803–813. https://doi.org/10.1177/1094428118773856

Mumford, M. D. (2011). A hale farewell: The state of leadership research. *The Leadership Quarterly*, *22*(1), 1–7. https://doi.org/10.1016/j.leaqua.2010.12.001

Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus User's Guide* (8th ed.). Muthén & Muthén.

Nebeker, D. M., & Tatum, B. C. (2002). Understanding organizational processes and performance: A continuous improvement model for consulting psychologists. In R. L. Lowman (Ed.), *Handbook of organizational consulting psychology: A comprehensive guide to theory, skills, and techniques* (pp. 682–691). Jossey-Bass.

Nelson, D., & Cooper, C. (2005). Stress and health: A positive direction. *Stress and Health*, *21*(2), 73–75. https://doi.org/10.1002/smi.1053

Nelson, D. L., & Quick, J. C. (1991). Social support and newcomer adjustment in organizations: Attachment theory at work? *Journal of Organizational Behavior*, *12*(6), 543–554. https://doi.org/10.1002/job.4030120607

Newman, A., Ucbasaran, D., Zhu, F., & Hirst, G. (2014). Psychological capital: A review and synthesis. *Journal of Organizational Behavior*, *35*(S1), S120-S138. https://doi.org/10.1002/job.1916

Ng, B. C. S., Zhang, X., & Chen, Z. X. G. (2018). A stress perspective on antecedents of abusive supervision: Blaming the organisation when exhausted supervisors abuse. *Journal of Management & Organization*, *9*, 1–21. https://doi.org/10.1017/jmo.2018.71

Nielsen, K., & Munir, F. (2009). How do transformational leaders influence followers' affective well-being? Exploring the mediating role of self-efficacy. *Work & Stress*, *23*(4), 313–329. https://doi.org/10.1080/02678370903385106

Nielsen, K., & Taris, T. W. (2019). Leading well: Challenges to researching leadership in occupational health psychology – and some ways forward. *Work & Stress*, *33*(2), 107–118. https://doi.org/10.1080/02678373.2019.1592263

Nielsen, K., Yarker, J., Randall, R., & Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: A cross-sectional questionnaire survey. *International Journal of Nursing Studies*, *46*(9), 1236–1244. https://doi.org/10.1016/j.ijnurstu.2009.03.001

Nifadkar, S., Tsui, A. S., & Ashforth, B. E. (2012). The way you make me feel and behave: Supervisor-triggered newcomer affect and approach-avoidance behavior. *Academy of Management Journal*, *55*(5), 1146–1168. https://doi.org/10.5465/amj.2010.0133

Nyberg, A., Bernin, P., & Theorell, T. (2005). *The impact of leadership on the health of subordinates*. National Institute for Working Life.

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A monte carlo

simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(4), 535–569. https://doi.org/10.1080/10705510701575396

O'Toole, V. M., & Friesen, M. D. (2016). Teachers as first responders in tragedy: The role of emotion in teacher adjustment eighteen months post-earthquake. *Teaching and Teacher Education*, *59*, 57–67. https://doi.org/10.1016/j.tate.2016.05.012

OECD. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. *Education and training policy*. OECD Publications. http://www.oecd.org/education/school/34990905.pdf

Olaniyan, O. S., & Hystad, S. W. (2016). Employees' psychological capital, job satisfaction, insecurity, and intentions to quit: The direct and indirect effects of authentic leadership. *Revista De Psicología Del Trabajo Y De Las Organizaciones [Journal of Work and Organizational Psychology]*, *32*(3), 163–171. https://doi.org/10.1016/j.rpto.2016.09.003

Olsen, O. K., Pallesen, S., Torsheim, T., & Espevik, R. (2016). The effect of sleep deprivation on leadership behaviour in military officers: An experimental study. *Journal of Sleep Research*, *25*(6), 683–689. https://doi.org/10.1111/jsr.12431

Osborn, R. N., Hunt, J. G., & Jauch, L. R. (2002). Toward a contextual theory of leadership. *The Leadership Quarterly*, *13*, 797–837.

Ostroff, C., Kinicki, A. J., & Muhammad, R. S. (2013). Organizational culture and climate. In I. B. Weiner, N. W. Schmitt, & S. Highhous (Eds.), *Handbook of psychology, Vol 12: Industrial and organizational psychology* (pp. 643–676). John Wiley and Sons.

Owen, M. S., Bailey, T. S., & Dollard, M. F. (2016). Psychosocial safety climate as a multilevel extension of ERI theory: Evidence from Australia. In J. Siegrist & M. Wahrendorf (Eds.), *Work stress and health in a globalized economy* (pp. 189–217). Springer International Publishing. https://doi.org/10.1007/978-3-319-32937-6_9

Palmer, D. K. (2016). Taking time seriously as a component of employee resilience. *Industrial and Organizational Psychology*, *9*(2), 517–522. https://doi.org/10.1017/iop.2016.49

Pellerin, N., Raufaste, E., Corman, M., Teissedre, F., & Dambrun, M. (2021). Mental health trajectories during the Covid-19 lockdown: Evidence for resilience and the role of psychological resources and flexibility. HaL open science.

Perko, K., Kinnunen, U., Tolvanen, A., & Feldt, T. (2016). Investigating occupational well-being and leadership from a person-centred longitudinal approach: Congruence of well-being and perceived leadership. *European Journal of Work and Organizational Psychology*, *25*(1), 105–119. https://doi.org/10.1080/1359432X.2015.1011136

Peterson, C. (2000). The future of optimism. *American Psychologist*, *55*(1), 44–55.

Pfefferbaum, B., Schonfeld, D., Flynn, B. W., Norwood, A. E., Dodgen, D., Kaul, R. E., Donato, D., Stone, B., Brown, L. M., Reissman, D. B., Jacobs, G. A., Hobfoll, S. E., Jones, R. T., Herrmann, J., Ursano, R. J., & Ruzek, J. I. (2012). The H1N1 crisis: A case study of the integration of mental and behavioral health in public health crises. *Disaster Medicine and Public Health Preparedness*, *6*(1), 67–71. https://doi.org/10.1001/dmp.2012.2

Pinquart, M., Juang, L. P., & Silbereisen, R. K. (2003). Self-efficacy and successful school-to-work transition: A longitudinal study. *Journal of Vocational Behavior*, *63*(3), 329–346. https://doi.org/10.1016/S0001-8791(02)00031-3

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, *36*(4), 717–731.

Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, *15*(3), 209–233. https://doi.org/10.1037/a0020141

Price, H. E. (2012). Principal–teacher interactions: How affective relationships shape principal and teacher attitudes. *Educational Administration Quarterly*, *48*(1), 39–85. https://doi.org/10.1177/0013161X11417126

Price, M. S., & Weiss, M. R. (2000). Relationships among coach burnout, coach behaviors, and athletes' psychological responses. *The Sport Psychologist*, *14*(4), 391–409. https://doi.org/10.1123/tsp.14.4.391

Pundt, F., & Felfe, J. (2017). Health oriented leadership. Instrument zur Erfassung gesundheitsförderlicher Führung [Health oriented leadership. An instrument to measure health promoting leadership]. Hogrefe.

Qian, S., Yuan, Q., Lim, V. K. G., Niu, W., & Liu, Z. (2020). Do job insecure leaders perform less transformational leadership? the roles of emotional exhaustion and trait mindfulness. *Journal of Leadership & Organizational Studies*, *27*(4), 376–388. https://doi.org/10.1177/1548051820938327

Rabenu, E., Yaniv, E., & Elizur, D. (2017). The relationship between psychological capital, coping with stress, well-being, and performance. *Current Psychology*, *36*(4), 875–887. https://doi.org/10.1007/s12144-016-9477-4

Rego, A., Sousa, F., Marques, C., & Cunha, M. P. e. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of Business Research*, *65*(3), 429–437. https://doi.org/10.1016/j.jbusres.2011.10.003

Reimers, F. M., & Schleicher, A. (2020). A framework to guide an education response to the COVID-19 pandemic of 2020. OECD.

Reusch, A., Zwingmann, C., & Faller, H. (2002). Empfehlungen zum Umgang mit Daten in der Rehabilitationsforschung [Recommendations for handling data in rehabilitation research]. Roderer.

Rigotti, T., Holstad, T., Mohr, G., Stempel, C., Hansen, E., Loeb, C., Isaksson, K., Otto, K., Kinnunen, U. & Perko, K. (2014). *Rewarding and sustainable healthpromoting leadership*. Dortmund: BAuA.

Rigotti, T., Schyns, B., & Mohr, G. (2008). A short version of the occupational self-efficacy scale: Structural and construct validity across five countries. *Journal of Career Assessment*, *16*(2), 238–255. https://doi.org/10.1177/1069072707305763

Roche, M., Haar, J. M., & Luthans, F. (2014). The role of mindfulness and psychological capital on the well-being of leaders. *Journal of Occupational Health Psychology*, *19*(4), 476–489. https://doi.org/10.1037/a0037183

Roe, R. A. (2008). Time in applied psychology. *European Psychologist*, *13*(1), 37–52. https://doi.org/10.1027/1016-9040.13.1.37

Rosenbusch, H. S., Braun-Bau, S., & Warwas, J. (2006). Schulleitungstätigkeit an bayerischen Grund-, Haupt- und Realschulen: Bestandsaufnahme und Vorschläge für eine Neuorientierung [School management activities at Bavarian elementary, junior high and high schools: Taking stock and proposals for a reorientation]. Bamberg. Forschungsstelle für Schulentwicklung und Schulmanagement der Universität Bamberg [Research Center for School Development and School Management at the University of Bamberg]. https://www.uni-bamberg.de/fileadmin/uni/wissenschaft_einricht/schulentwicklung/Forschungsstelle/projektartikel/Gutachten-schulleitungst_tigkeit.pdf

Ross, J. A., & Gray, P. (2006). Transformational leadership and teacher commitment to organizational values: The mediating effects of collective teacher efficacy. *School Effectiveness and School Improvement*, *17*(2), 179–199. https://doi.org/10.1080/09243450600565795

Röttger, S., Maier, J., Krex-Brinkmann, L., Kowalski, J., Danker-Hopfe, H., Sauter, C., & Stein, M [Michael] (2017). The benefits of sleep coaching in workplace health promotion. *Journal of Public Health*, *25*(6), 685–691. https://doi.org/10.1007/s10389-017-0826-z

Rudolph, C. W., Allan, B., Clark, M., Hertel, G., Hirschi, A., Kunze, F., Shockley, K., Shoss, M., Sonnentag, S., & Zacher, H. (2020). *Pandemics: Implications for research and practice in industrial and organizational psychology.* https://doi.org/10.31234/osf.io/k8us2

Rudolph, C. W., Murphy, L. D., & Zacher, H. (2020). A systematic review and critique of research on "healthy leadership". *The Leadership Quarterly*, *31*(1), 101335. https://doi.org/10.1016/j.leaqua.2019.101335

Ryu, E., & West, S. G. (2009). Level-specific evaluation of model fit in multilevel structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, *16*(4), 583–601. https://doi.org/10.1080/10705510903203466

Saks, A. M. (1994). Moderating effects of self-efficacy for the relationship between training method and anxiety and stress reactions of newcomers. *Journal of Organizational Behavior*, *15*, 639–654.

Saks, A. M., & Gruman, J. A. (2011). Getting newcomers engaged: the role of socialization tactics. *Journal of Managerial Psychology*, *26*(5), 383–402. https://doi.org/10.1108/02683941111139001

Santa Maria, A., Wolter, C., Gusy, B., Kleiber, D., & Renneberg, B. (2019). The impact of health-oriented leadership on police officers' physical health, burnout, depression and well-being. *Policing: A Journal of Policy and Practice*, *13*(2), 186–200. https://doi.org/10.1093/police/pay067

Santa Maria, A., Wolter, C., Gusy, B., Kleiber, D., & Renneberg, B. (2020). Reducing work-related burnout among police officers: The impact of job rewards and health-oriented leadership. *The Police Journal: Theory, Practice and Principles*, 1-16. https://doi.org/10.1177/0032258X20946805

Sasaki, N., Kuroda, R., Tsuno, K., & Kawakami, N. (2020). Workplace responses to COVID-19 associated with mental health and work performance of employees in Japan. *Journal of Occupational Health*, *62*(1), e12134. https://doi.org/10.1002/1348-9585.12134

Schaarschmidt, U. (2005). Halbtagsjobber? Psychische Gesundheit im Lehrerberuf. Analyse eines veränderungsbedürftigen Zustandes [Half-time jobbers? Mental health in the teaching profession. Analysis of a condition in need of change]. Beltz.

Schaufeli, W. B. (2015). Engaging leadership in the job demands–resources model. *Career Development International*, *20*(5), 446–463. https://doi.org/10.1108/CDI-02-2015-0025

Schaufeli, W. B., Salanova, M., Gonzaléz-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*, 71–92.

Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & Witte, H. de (2019). An ultra-short measure for work engagement. *European Journal of Psychological Assessment*, *35*(4), 577–591. https://doi.org/10.1027/1015-5759/a000430

Scheuch, K., Pardula, T., Prodehl, G., Winkler, C., & Seibt, R. (2016). Betriebsärztliche Betreuung von Lehrkräften: Ausgewählte Ergebnisse aus Sachsen [Occupational health care of teachers: Selected results from Saxony]. *Prävention Und Gesundheitsförderung [Prevention and Health Promotion]*, *11*(3), 147–153. https://doi.org/10.1007/s11553-016-0548-z

Schneider, B. (1975). Organizational climates: An essay. *Personnel Psychology*, *28*(4), 447–479. https://doi.org/10.1111/j.1744-6570.1975.tb01386.x

Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology*, *64*, 361–388. https://doi.org/10.1146/annurev-psych-113011-143809

Schuckert, M., Kim, T. T., Paek, S., & Lee, G. (2018). Motivate to innovate: How authentic and transformational leaders influence employees' psychological capital and service innovation behavior. *International Journal of Contemporary Hospitality Management*, *30*(2), 776–796. https://doi.org/10.1108/IJCHM-05-2016-0282

Schueler, K., Fritz, J., Dorfschmidt, L., van Harmelen, A.-L., Strömer, E., & Wessa, M. (2020). *Psychological network analysis of general self-efficacy in high vs low resilient functioning healthy adults.* https://doi.org/10.31219/osf.io/kvgyj

Schulte, E.-M., Lang, J., & Kauffeld, S. (2018). Gesund führen, aber wie? Wie die Förderung von Self Care und Staff Care gelingt [Healthy leadership, but how? How to successfully promote Self Care and Staff Care]. *PERSONALquarterly*, *70*(2), 24–31.

Schyns, B., & Schilling, J. (2013). How bad are the effects of bad leaders? A meta-analysis of destructive leadership and its outcomes. *The Leadership Quarterly*, *24*(1), 138–158. https://doi.org/10.1016/j.leaqua.2012.09.001

Seibt, R., Hübler, A., Steputat, A., & Scheuch, K. (2012). Verausgabungs-Belohnung-Verhältnis und Burnout-Risiko bei Lehrerinnen und Ärztinnen - ein Berufsgruppenvergleich [Effort-reward-ratio and burnout risk among female teachers and hospital employed female physicians - a comparison between professions]. *Arbeitsmed Sozialmed Umweltmed [Occupational Med Social Med Environmental Med]*, *47*, 396–406.

Seligman, M. E. P. (2006). Learned optimism: How to change your mind and your life (3rd ed.). Random House.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *The American Psychologist*, *55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Semling, C., & Zölch, M. (2008). Human Resource Management als Aufgabe der Schulleitung [Human resource management as a task of school principals]. In A. Krause, H. Schüpbach, E. Ulich, & M. Wülser (Eds.), *Arbeitsort Schule: Organisations- und arbeitspsychologische Perspektiven [School as a place of work: Perspectives from organizational and occupational psychology]* (pp. 211–240). Gabler.

Semmer, N. K., Zapf, D., & Dunckel, H. (1998). Instrument zur streßbezogenen Tätigkeitsanalyse ISTA [Instrument for stress-related activity analysis ISTA]. In H. Dunckel (Ed.), *Handbuch der Instrumente zur Arbeitsanalyse [Manual of instruments for work analysis].* Verlag der Fachvereine Hochschulverlag.

Sharma, P. N. (2018). Moving beyond the employee: The role of the organizational context in leader workplace aggression. *The Leadership Quarterly*, *29*(1), 203–217. https://doi.org/10.1016/j.leaqua.2017.12.002

Sinclair, R. R., Probst, T. M., Watson, G. P., & Bazzoli, A. (2020). Caught between Scylla and Charybdis: How economic stressors and occupational risk factors influence workers' occupational health reactions to COVID-19. *Applied Psychology: An International Review*. Advance online publication. https://doi.org/10.1111/apps.12301

Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work & Stress*, *24*(2), 107–139. https://doi.org/10.1080/02678373.2010.495262

Sluss, D. M., & Thompson, B. S. (2012). Socializing the newcomer: The mediating role of leader–member exchange. *Organizational Behavior and Human Decision Processes*, *119*(1), 114–125. https://doi.org/10.1016/j.obhdp.2012.05.005

Smith, L., & Riley, D. (2012). School leadership in times of crisis. *School Leadership & Management*, *32*(1), 57–71. https://doi.org/10.1080/13632434.2011.614941

Snyder, C. R. (2002). TARGET ARTICLE: Hope theory: Rainbows in the mind. *Psychological Inquiry*, *13*(4), 249–275. https://doi.org/10.1207/S15327965PLI1304_01

Song, L., Wang, Y [Yong], & Zhao, Y [Yukun] (2021). How employee authenticity shapes work attitudes and behaviors: The mediating role of psychological capital and the moderating role of leader authenticity. *Journal of Business and Psychology*, *36*(6), 1125–1136. https://doi.org/10.1007/s10869-020-09725-0

Sonnentag, S. (2012). Time in organizational research: Catching up on a long neglected topic in order to improve theory. *Organizational Psychology Review*, *2*(4), 361–368. https://doi.org/10.1177/2041386612442079

Spector, P. E., & O'Connell, B. J. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to the subsequent reports of job stressors and job strains. *Journal of Occupational and Organizational Psychology*, *67*(1), 1–12. https://doi.org/10.1111/j.2044-8325.1994.tb00545.x

Statistisches Bundesamt. (2019). https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung-Kultur/Schulen/Tabellen/allgemeinbildende-beruflicheschulen-lehrkraefte.html

Stern, E. (2013). Preparing: The sixth task of crisis leadership. *Journal of Leadership Studies*, *7*(3), 51–56. https://doi.org/10.1002/jls.21298

Stogdill, R. M. (1950). Leadership, membership and organization. *Psychological Bulletin*, *47*(1), 1–14. https://doi.org/10.1037/h0053857

Strauss, K., Niven, K., R. McClelland, C., & Cheung, B. K. T. (2015). Hope and optimism in the face of change: Contributions to task adaptivity. *Journal of Business and Psychology*, *30*(4), 733–745. https://doi.org/10.1007/s10869-014-9393-2

Stride, C. B., Gardner, S., Catley, N., & Thomas, F. (2015). *Mplus code for mediation, moderation, and moderated mediation models*. http://www.offbeat.group.shef.ac.uk/FIO/mplusmedmod.htm

Tarnopol, L. (1958). Personality differences between leaders and non-leaders. *Personnel Journal*, *37*, 57–60.

Taylor, C., Dollard, M. F., Clark, A., Dormann, C., & Bakker, A. B. (2019). Psychosocial safety climate as a factor in organisational resilience: Implications for worker psychological health, resilience, and engagement. In M. F. Dollard, C. Dormann, & M. Awang Idris (Eds.), *Psychosocial safety climate: A new work stress theory* (pp. 199–228). Springer International Publishing.

Tepper, B. J., Duffy, M. K., Henle, C. A., & Lambert, L. S. (2006). Procedural injustice, victim precipitation, and abusive supervision. *Personnel Psychology*, *59*(1), 101–123. https://doi.org/10.1111/j.1744-6570.2006.00725.x

Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, *43*(2), 178–190. https://doi.org/10.5465/1556375

Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, *83*(3), 357–385. https://doi.org/10.3102/0034654313483907

Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of Occupational Health Psychology*, *18*(2), 230–240. https://doi.org/10.1037/a0032141

Tofighi, D., & MacKinnon, D. P. (2011). Rmediation: An R package for mediation analysis confidence intervals. *Behavior Research Methods*, *43*(3), 692–700. https://doi.org/10.3758/s13428-011-0076-x

Trust, T., & Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *Journal of Technology and Teacher Education*, *28*(2), 189–199.

Tu, Y., Lu, X., Choi, J. N., & Guo, W. (2019). Ethical leadership and team-level creativity: Mediation of psychological safety climate and moderation of

supervisor support for creativity. *Journal of Business Ethics*, *159*(2), 551–565. https://doi.org/10.1007/s10551-018-3839-9

Turgut, S., Schlachter, S., Michel, A., & Sonntag, K. (2020). Antecedents of health-promoting leadership and workload as moderator. *Journal of Leadership & Organizational Studies*, *27*(2), 203–214. https://doi.org/10.1177/1548051819848988

Turner, R. J., & Wheaton, B. (1997). Checklist measurement of stressful life events. In S. Cohen, R. C. Kessler, & L. Underwood Gordon (Eds.), *Measuring stress: A guide for health and social scientists* (pp. 29–58). Oxford Univ. Press.

Uglanova, E. A., & Staudinger, U. M. (2013). Zooming in on life events: Is hedonic adaptation sensitive to the temporal distance from the event? *Social Indicators Research*, *111*(1), 265–286. https://doi.org/10.1007/s11205-012-0004-1

Valero, D., & Hirschi, A. (2019). To hangover or not: trajectories of job satisfaction in adolescent workforce newcomers. *European Journal of Work and Organizational Psychology*, *28*(2), 150–163. https://doi.org/10.1080/1359432X.2018.1564278

van Ackeren, I., Binnewies, C., Clausen, M., Demski, D., Dorman, C., Koch, A. R., Lauer, B., Preisendörfer, P., Preuße, D. Rosenbusch, C., Schmidt, U., Stump, M., & Zlatkin-Troitschanskaia, O. (2013). Welche Wissensbestände nutzen Schulen im Kontext von Schulentwicklung? Theoretische Konzepte und erst deskriptive Befunde des EviS-Verbundprojektes im Überblick [Which body of knowledge do schools use in the context of school development? Theoretical concepts and first descriptive findings of the EviS collaborative project at a glance]. *Die Deutsche Schule [The German School], 12*, 51–73.

van de Schoot, R., Sijbrandij, M., Winter, S. D., Depaoli, S., & Vermunt, J. K. (2017). The GRoLTS-checklist: Guidelines for reporting on latent trajectory studies. *Structural Equation Modeling: A Multidisciplinary Journal*, *24*(3), 451–467. https://doi.org/10.1080/10705511.2016.1247646

van Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004). Leadership behavior and subordinate well-being. *Journal of Occupational Health Psychology*, *9*(2), 165–175. https://doi.org/10.1037/1076-8998.9.2.165

van Harmelen, A.-L., Kievit, R. A., Ioannidis, K., Neufeld, S., Jones, P. B., Bullmore, E., Dolan, R., Fonagy, P., & Goodyer, I. (2017). Adolescent friendships predict later resilient functioning across psychosocial domains in a healthy community cohort. *Psychological Medicine*, *47*(13), 2312–2322. https://doi.org/10.1017/S0033291717000836

van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: The moderating role of leader prototypicality. *Journal of Applied Psychology*, *90*(1), 25–37. https://doi.org/10.1037/0021-9010.90.1.25

van Knippenberg, D., & Sitkin, S. B. (2013). A critical assessment of charismatic—transformational leadership research: Back to the drawing board? *Academy of Management Annals*, *7*(1), 1–60. https://doi.org/10.5465/19416520.2013.759433

van Zoonen, W., & Hoeven, C. L. ter (2021). Disruptions and general distress for essential and nonessential employees during the COVID-19 pandemic. *Journal of Business and Psychology*, 1–16. https://doi.org/10.1007/s10869-021-09744-5

Veer, I. M., Riepenhausen, A., Zerban, M., Wackerhagen, C., Puhlmann, L. M. C., Engen, H., Köber, G., Bögemann, S. A., Weermeijer, J., Uściłko, A., Mor, N., Marciniak, M. A., Askelund, A. D., Al-Kamel, A., Ayash, S., Barsuola, G., Bartkute-Norkuniene, V., Battaglia, S., Bobko, Y., . . . Kalisch, R. (2021). Psycho-social factors associated with mental resilience in the Corona lockdown. *Translational Psychiatry*, *11*(1), 67. https://doi.org/10.1038/s41398-020-01150-4

Vilagut, G., Forero, C. G., Pinto-Meza, A., Haro, J. M., Graaf, R. de, Bruffaerts, R., Kovess, V., Girolamo, G. de, Matschinger, H., Ferrer, M., & Alonso, J. (2013). The mental component of the short-form 12 health survey (SF-12) as a measure of depressive disorders in the general population: Results with three alternative scoring methods. *Value in Health : The Journal of the International Society for Pharmacoeconomics and Outcomes Research*, *16*(4), 564–573. https://doi.org/10.1016/j.jval.2013.01.006

Vincent, S. (2011). Gesundheits- und entwicklungsförderliches Führungsverhalten: ein Analyseinstrument [Leadership behavior conducive to health and development: an analytical tool]. In B. Badura, A. Ducki, H.

Schröder, J. Klose, & K. Macco (Eds.), *Fehlzeiten-Report 2011 [Absenteeism Report 2011]* (pp. 49–60). Springer. https://doi.org/10.1007/978-3-642-21655-8_5

Vincent, S. (2012). Gesundheits- und entwicklungsförderliches Führungsverhalten: Gendertypische Differenzen [Leadership behaviors conducive to health and development: Gender differences]. *Gruppendynamik Und Organisationsberatung [Group Dynamics and Organizational Consulting]*, *43*(1), 61–89. https://doi.org/10.1007/s11612-011-0170-7

Vincent-Höper, S., & Stein, M [Maie] (2019). The role of leaders in designing employees' work characteristics: Validation of the health- and development-promoting leadership behavior questionnaire. *Frontiers in Psychology*, *10*, 1049. https://doi.org/10.3389/fpsyg.2019.01049

Vonderlin, R., Schmidt, B., Müller, G., Biermann, M., Kleindienst, N., Bohus, M., & Lyssenko, L. (2020). Health-oriented leadership and mental health from supervisor and employee perspectives: A multilevel and multisource approach. *Frontiers in Psychology*, *11*, 614803. https://doi.org/10.3389/fpsyg.2020.614803

Vullinghs, J. T., & Dóci, E. (2020). A temporal approach to studying organizational leadership. In Y. Griep & S. D. Hansen (Eds.), *Handbook on the temporal dynamics of organizational behavior* (pp. 251–273). Edward Elgar Publishing.

Waaktaar, T., & Torgersen, S. (2010). How resilient are resilience scales? The Big Five scales outperform resilience scales in predicting adjustment in adolescents. *Scandinavian Journal of Psychology*, *51*(2), 157–163. https://doi.org/10.1111/j.1467-9450.2009.00757.x

Waldman, D. A., Ramírez, G. G., House, R. J., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal*, *44*(3), 134–143.

Wang, Y [Yanfei], Liu, J., & Zhu, Y. (2018). How does humble leadership promote follower creativity? The roles of psychological capital and growth need

strength. *Leadership & Organization Development Journal*, *39*(4), 507–521. https://doi.org/10.1108/LODJ-03-2017-0069

Ware, J. E., Kosinski, M., & Keller, S. D. (1996). A 12-item short-form health survey: Construction of scales and preliminary tests of reliability and validity. *Medical Care*, *34*(3), 220–233.

Ware, J. E., & Sherbourne, C. D. (1992). The MOS 36-item short-form health survey (SF-36): Conceptual framework and item selection. *Medical Care*, *30*(6), 473–483.

Warwas, J. (2012). Berufliches Selbstverständnis, Beanspruchung und Bewältigung in der Schulleitung [Professional self-concept, stress and coping in school leadership]. VS Verlag für Sozialwissenschaften. https://doi.org/10.1007/978-3-531-19300-7

Wegge, J., Shemla, M., & Haslam, S. A. (2014). Leader behavior as a determinant of health at work: Specification and evidence of five key pathways. *German Journal of Human Resource Management: Zeitschrift Für Personalforschung*, *28*(1-2), 6–23. https://doi.org/10.1177/239700221402800102

Weick, K. E. (1976). Educational organizations as loosely coupled systems. *Administrative Science Quarterly*, *21*(1), 1. https://doi.org/10.2307/2391875

Wickrama, K. A. S., Lee, T. K., O'Neal, C. W., & Lorenz, F. O. (2016). Higher-order growth curves and mixture modeling with Mplus: A practical guide. Multivariate applications series. Routledge.

Wirtz, M. A., Morfeld, M., Glaesmer, H., & Brähler, E. (2018). Normierung des SF-12 Version 2.0 zur Messung der gesundheitsbezogenen Lebensqualität in einer deutschen bevölkerungsrepräsentativen Stichprobe. *Diagnostica*, *64*(4), 215–226. https://doi.org/10.1026/0012-1924/a000205

Wirtz, N. (2018). *Interpersonal aspects of leadership and implications for health and well-being* [Unpublished Dissertation]. Johannes Gutenberg University, Mainz, Germany.

Woolley, L., Caza, A., & Levy, L. (2011). Authentic leadership and follower development: Psychological capital, positive work climate, and gender. *Journal of Leadership & Organizational Studies*, *18*(4), 438–448. https://doi.org/10.1177/1548051810382013

World Health Organization. (2006). Constitution of the world health organization: Basic documents.

Wright, T. A., Emich, K. J., & Klotz, D. (2017). The many 'faces' of well-being. In R. Burke & K. Page (Eds.), *Research Handbook on Work and Well-Being* (pp. 37–58). Edward Elgar Publishing.

Wülser, M. (2008). Begrenzte Responsivität und Fehlbeanspruchungen bei Lehrkräften [Limited responsiveness and strain among teachers]. In A. Krause, H. Schüpbach, E. Ulich, & M. Wülser (Eds.), *Arbeitsort Schule: Organisations- und arbeitspsychologische Perspektiven [School as a place of work: perspectives from organizational and occupational psychology]* (pp. 101–132). Gabler.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands–resources model. *International Journal of Stress Management*, *14*(2), 121–141. https://doi.org/10.1037/1072-5245.14.2.121

Xu, B.-D., Zhao, S.-K., Li, C.-R., & Lin, C.-J. (2017). Authentic leadership and employee creativity: testing the multilevel mediation model. *Leadership & Organization Development Journal*, *38*(3), 482–498. https://doi.org/10.1108/LODJ-09-2015-0194

Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress and Health : Journal of the International Society for the Investigation of Stress*, *31*(3), 180–188. https://doi.org/10.1002/smi.2623

Yukl, G., Gordon, A., & Taber, T. (2002). A hierarchical taxonomy of leadership behavior: Integrating a half century of behavior research. *Journal of Leadership & Organizational Studies*, *9*(1), 15–32. https://doi.org/10.1177/107179190200900102

Yulita, Dollard, M. F., & Idris, M. A. (2017). Climate congruence: How espoused psychosocial safety climate and enacted managerial support affect emotional exhaustion and work engagement. *Safety Science*, *96*, 132–142. https://doi.org/10.1016/j.ssci.2017.03.023

Zaccaro, S. J., Green, J. P., Dubrow, S., & Kolze, M. (2018). Leader individual differences, situational parameters, and leadership outcomes: A

comprehensive review and integration. *The Leadership Quarterly*, *29*(1), 2–43. https://doi.org/10.1016/j.leaqua.2017.10.003

Zacher, H., & Rudolph, C. W. (2021). Individual differences and changes in subjective wellbeing during the early stages of the COVID-19 pandemic. *The American Psychologist*, *76*(1), 50–62. https://doi.org/10.1037/amp0000702

DIE ZEIT (1998, October 1). Fit für die Firma: Gute Chefs beugen vor und sorgen sich um das Wohlbefinden ihrer Angestellten [Fit for the company: Good bosses prevent and care about the well-being of their employees]. https://www.zeit.de/1998/41/199841.c-gesund_.xml/komplettansicht

Zhang, H., Zhao, Y [Yi], Zou, P., Liu, Y., Lin, S., Ye, Z., Tang, L., Shao, J., & Chen, D. (2020). The relationship between autonomy, optimism, work engagement and organisational citizenship behaviour among nurses fighting COVID-19 in Wuhan: A serial multiple mediation. *BMJ Open*, *10*(9), e039711. https://doi.org/10.1136/bmjopen-2020-039711

Zimber, A., Hentrich, S., Bockhoff, K., Wissing, C., & Petermann, F. (2015). Wie stark sind Führungskräfte psychisch gefährdet? [To what extent are managers psychologically at risk?]. *Zeitschrift Für Gesundheitspsychologie [Journal of Health Psychology]*, *23*(3), 123–140. https://doi.org/10.1026/0943-8149/a000143

Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology*, *65*(1), 96–102. https://doi.org/10.1037/0021-9010.65.1.96

Zohar, D. (2002). The effects of leadership dimensions, safety climate, and assigned priorities on minor injuries in work groups. *Journal of Organizational Behavior*, *23*(1), 75–92. https://doi.org/10.1002/job.130

Zohar, D., & Tenne-Gazit, O. (2008). Transformational leadership and group interaction as climate antecedents: A social network analysis. *The Journal of Applied Psychology*, *93*(4), 744–757. https://doi.org/10.1037/0021-9010.93.4.744

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Appendix

Supplementary Material for Study I

Table A.1 *Results of Group Comparisons Between Latent Classes of Physical Health (Study I)*

	Class comparisons	*Mean 1 (SD)*	*Mean 2 (SD)*	*T(df)*	*Cohen's d*
t1	increasing vs. decreasing	40.95(5.29)	51.21(5.57)	-9.65(117)***	-1.89
	decreasing vs. resilient	51.21(5.57)	55.77(2.80)	-11.94(734)***	-1.04
	increasing vs. resilient	40.95(5.29)	55.77(2.80)	-30.38(695)***	-3.50
t2	increasing vs. decreasing	49.58(6.80)	46.25(7.98)	2.26(117)	0.45
	decreasing vs. resilient	46.25(7.98)	55.29(4.34)	-15.62(734)***	-1.41
	increasing vs. resilient	49.58(6.80)	55.29(4.34)	-20.14(695)***	-1.00
t3	increasing vs. decreasing	55.68(4.04)	41.78(5.33)	14.50(117)***	2.94
	decreasing vs. resilient	41.78(5.33)	55.63(3.65)	-30.13(734)***	-3.03
	increasing vs. resilient	55.68(4.04)	55.63(3.65)	0.08(695)	0.01

Note: * $p < .05$, ** $p < .01$, *** $p < .001$, p-values after Bonferroni correction

Table A.2 *Results of Group Comparisons Between Latent Classes of Mental Health (Study I)*

	Class comparisons	*Mean 1 (SD)*	*Mean 2 (SD)*	*T(df)*	*Cohen's d*
t1	decreasing vs. increasing	51.55(4.66)	38.81(5.24)	17.75(196)***	2.57
	decreasing vs. resilient	51.55(4.66)	53.75(3.77)	-5.56(651)***	-0.48
	decreasing vs. low-chronic	51.55(4.66)	32.55(7.14)	20.59(171)***	3.15
	increasing vs. resilient	38.81(5.24)	53.75(3.77)	-30.23(601)***	-3.27
	resilient vs. low-chronic	53.75(3.77)	32.55(7.14)	34.13(576)***	3.71
	increasing vs. low-chronic	38.81(5.24)	32.55(7.14)	5.60(121)***	1.00
t2	decreasing vs. increasing	39.17(10.77)	42.95(9.02)	-2.53(196)	-0.38
	decreasing vs. resilient	39.17(10.77)	51.26(6.03)	-16.89(651)***	-1.38
	decreasing vs. low-chronic	39.17(10.77)	29.78(7.51)	17.39(171)***	1.01
	increasing vs. resilient	42.95(9.02)	51.26(6.03)	-10.35(601)***	-1.08
	resilient vs. low-chronic	51.26(6.03)	29.78(7.51)	23.32(576)***	3.15
	increasing vs. low-chronic	42.95(9.02)	29.78(7.51)	20.91(121)***	1.59
t3	decreasing vs. increasing	30.54(6.46)	44.11(6.63)	-14.16(196)***	-2.07
	decreasing vs. resilient	30.54(6.46)	51.11(5.30)	-37.20(651)***	-3.48
	decreasing vs. low-chronic	30.54(6.46)	26.29(6.45)	3.90(171)**	0.66
	increasing vs. resilient	44.11(6.63)	51.11(5.30)	-10.28(601)***	-1.16
	resilient vs. low-chronic	51.11(5.30)	26.29(6.45)	30.72(576)***	4.20
	increasing vs. low-chronic	44.11(6.63)	26.29(6.45)	14.74(121)***	2.72

Note: * $p < .05$, ** $p < .01$, *** $p < .001$, p-values after Bonferroni correction

Table A.3 *Results of Mediation Analysis (Study I)*

	PsyCap t2 *B (SE)*	Physical Score t3 *B (SE)*	Mental Score t3 *B (SE)*
Direct effects			
HoL t2	.36(.05)***	.49(.33)	.46(.52)
PsyCap t2		.29(.29)	1.19(.52)*
Physical Score t2		.40(.05)***	
Mental Score t2			.65(.04)***
Indirect effect			
HoL t2 – PsyCap t2		.10(.10)	.42(.20)*

Note: HoL = Health-oriented leadership, PsyCap = Psychological Capital

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

Figure A.1 *Different Class Solutions for Latent Trajectories of Physical Health (Study I)*

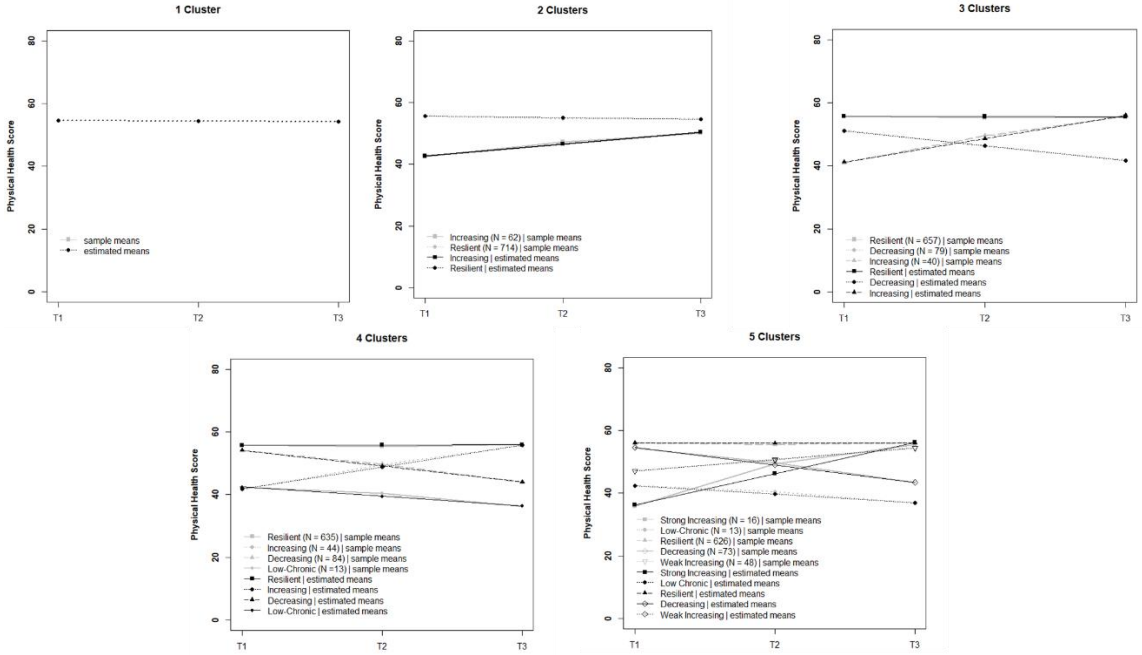
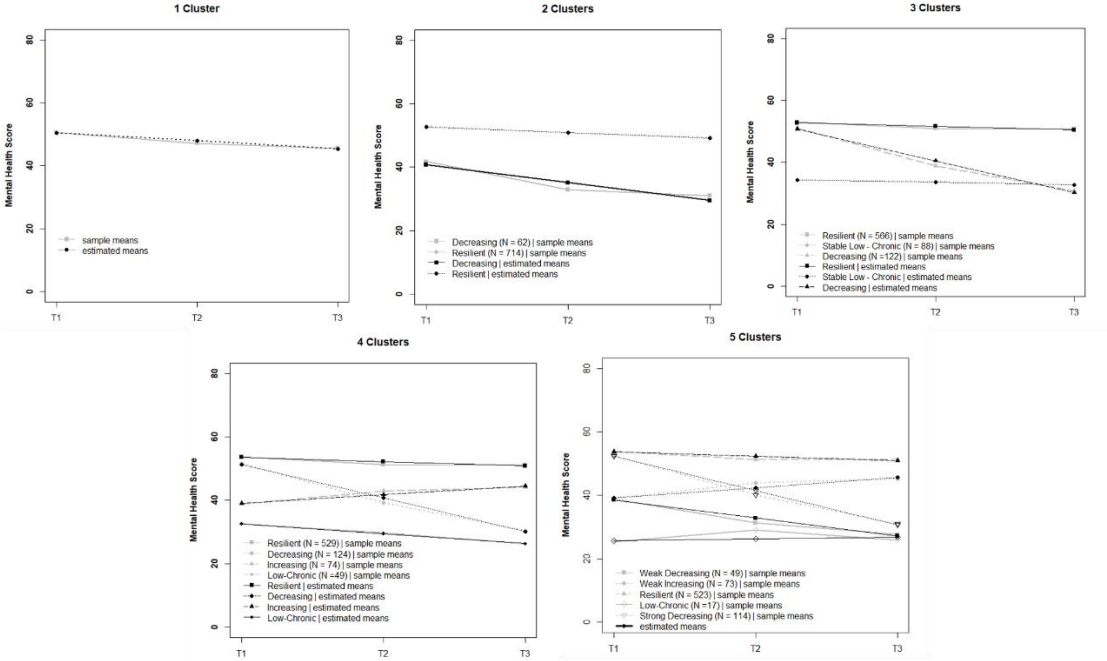


Figure A.2 *Different Class Solutions for Latent Trajectories of Mental Health (Study I)*



Supplementary Material for Study III

Table A.4 *Results of Within-Level Serial Mediation for each Job Resource (Study III)*

Predictor	Model 1: Job resource delegation			Model 2: Job resource autonomy			Model 3: Job resource support		
Outcome	SelfCare *B (SE)*	WE *B (SE)*	StaffCare *B (SE)*	SelfCare *B (SE)*	WE *B (SE)*	StaffCare *B (SE)*	SelfCare *B (SE)*	WE *B (SE)*	StaffCare *B (SE)*
Direct effects									
Resource	0.10(0.02)***	0.12(0.03)***	0.06(0.02)**	0.18(0.02)***	0.23(0.03)***	0.07(0.02)**	0.09(0.02)***	0.15(0.03)***	0.15(0.02)***
SelfCare		0.27(0.06)***	0.21(0.04)***		0.17(0.06)**	0.19(0.04)***		0.29(0.06)***	0.20(0.04)***
SelfCare t-1	0.14(0.03)***			0.12(0.03)***			0.14(0.03)***		
WE			0.15(0.02)***			0.14(0.02)***			0.14(0.02)***
WE t-1		0.15(0.04)***			0.16(0.04)***			0.16(0.04)***	
StaffCare t-1			0.11(0.04)**			0.11(0.04)**			0.12(0.04)**
Indirect effects									
Res - SelfCare		0.03(0.01)*** [0.01;0.04]			0.03(0.01)** [0.01;0.05]			0.03(0.01)** [0.01;0.04]	
Res - WE			0.02(0.01)** [0.01;0.03]			0.03(0.01)** [0.02;0.05]			0.02(0.01)** [0.01;0.03]
Res - SelfCare - WE			0.004(0.001)*** [0.002;0.01]			0.004(0.002)*** [0.001;0.01]			0.003(0.001)** [0.001;0.01]
Total effects									
Total			0.11(0.02)*** [0.07;0.15]			0.13(0.02)*** [0.09;0.18]			0.20(0.02)*** [0.15;0.24]
Total indirect			0.05(0.01)*** [0.03;0.07]			0.07(0.01)*** [0.04;0.09]			0.05(0.01)*** [0.03;0.07]
R^2	.10(.03)***	.11(.03)***	.17(.03)***	.16(.03)***	.16(.03)***	.17(.03)***	.09(.03)**	.12(.03)***	.21(.03)***

Note. Values in square brackets indicate the 95% Monte Carlo confidence interval for each indirect effect. WE = v engagement, EE = emotional exhaustion, Res = Resource. $N = 956$. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table A.8 *Results of Within-Level Serial Mediation for each Job Demand (Study III)*

Predictor	Model 4: Job demand interruptions			Model 5: Job demand problems			Model 6: Job demand role conflict		
Outcome	SelfCare *B (SE)*	EE *B (SE)*	StaffCare *B (SE)*	SelfCare *B (SE)*	EE *B (SE)*	StaffCare *B (SE)*	SelfCare *B (SE)*	EE *B (SE)*	StaffCare *B (SE)*
Direct effects									
Demand	-0.09(0.02)***	0.11(0.03)***	0.01(0.02)	-0.05(0.02)*	0.07(0.03)*	0.04(0.02) †	-0.10(0.02)***	0.21(0.03)***	-0.04(0.02)*
SelfCare		-0.61(0.07)***	0.25(0.04)***		-0.64(0.07)***	0.25(0.04)***		-0.55(0.07)***	0.23(0.04)***
SelfCare t-1	0.16(0.03)***			0.15(0.03)***			0.13(0.03)***		
EE			-0.06(0.02)**			-0.06(0.02)**			-0.05(0.02)*
EE t-1		0.14(0.03)***			0.13(0.03)***			0.12(0.03)***	
StaffCare t-1			0.12(0.04)***			0.12(0.04)**			0.11(0.04)**
Indirect effects									
Dem - SelfCare		0.06(0.01)*** [0.03;0.08]			0.03(0.01)* [0.01;0.06]			0.05(0.01)*** [0.03;0.08]	
Dem - EE			-0.01(0.003)* [-0.01;-0.001]			-0.004(0.002)* [-0.01;-0.0005]			-0.01(0.005)* [-0.02;-0.001]
Dem - SelfCare - EE			-0.003(0.001)** [-0.01;-0.001]			-0.002(0.001)* [-0.004;-0.0002]			-0.002(0.001)* [-0.01;-0.001]
Total effects									
Total			0.05(0.02)* [.01;.10]			0.06(0.03)* [.01;.11]			0.00(0.02) [-.04;.04]
Total indirect			0.05(0.01)** [.02;.07]			0.02(0.01) † [-.001;.05]			0.04(0.01)** [.02;.07]
R^2	.11(.03)**	.18(.03)***	.12(.03)***	.08(.03)**	.17(.03)***	.13(.03)***	.10(.03)**	.21(.03)***	.12(.03)***

Note. Values in square brackets indicate the 95% Monte Carlo confidence interval for each indirect effect. WE = work engagement, EE = emotional exhaustion, Dem = Demand. $N = 956$. † $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$

Publications included in this dissertation

The study described in the chapter "The role of health-oriented leadership for newcomers' resilience" has been published:

Arnold, M., & Rigotti, T. (2021). Is it getting better or worse? Health-oriented leadership and psychological capital as resources for sustained health in newcomers. *Applied Psychology, 70*(2), 709-737.