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Abstract

The role of leadership is especially important for employees' personal growth at work. In the present two-wave study (time lag 3 months), we investigated the relationship between teachers' perceptions of the transformational leadership style of their school principal and their thriving. Specifically, we examined the role of individuals' energy resources (i.e., emotional exhaustion) in the relationships between perceived transformational leadership and thriving, as well as two aspects of work performance (task mastery and proactivity). Findings from 200 teachers revealed no direct relationship between perceived transformational leadership and teachers' thriving. However, as expected, teachers' emotional exhaustion moderated the relationship between perceived transformational leadership and thriving; teachers' perceptions of the transformational leadership style was associated with a decrease in thriving when they reported moderate levels of emotional exhaustion. When teachers were very low in emotional exhaustion, perceived transformational leadership was associated with an increase in thriving. Moderated mediation analyses revealed significant indirect effects for proactivity for lower and higher levels of emotional exhaustion. We discuss the implications of the findings for theories of personal growth.

Keywords: thriving; transformational leadership; exhaustion; teacher; personal growth

Thriving When Exhausted: The Role of Perceived Transformational Leadership

It is increasingly being discussed how to promote personal growth in organizations with positive consequences for employees' health and performance (Spreitzer & Porath, 2013; Sonenshein, Dutton, Grant, Spreitzer, & Sutcliffe, 2013). When people grow at work, they feel vigorous and experience high levels of psychological functioning—they thrive (Spreitzer & Porath, 2013). Thriving is the joint experience of vitality and learning (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Studies have demonstrated that thriving predicts important work-related outcomes, such as better job performance (Paterson, Luthans, & Jeung, 2014; Porath, Spreitzer, Gibson, & Garnett, 2011), organizational citizenship behavior (Porath et al., 2011), innovative behavior (Carmeli & Spreitzer, 2009; Wallace, Butts, Johnson, Stevens, & Smith, 2013), job satisfaction and organizational commitment, better health, less burnout, less strain reactions (Porath et al., 2011), and more self-development (Paterson, Luthans, & Jenug, 2014).

Thriving is socially embedded, meaning that the social work environment shapes the experience of thriving (Spreitzer et al., 2005). Recently, researchers have begun to examine a key aspect of the social work environment: the role of leadership in individuals' thriving (Paterson et al., 2014; Spreitzer, Porath, & Gibson, 2012). As there is only sparse empirical research on leadership behaviors that promote employees' thriving, we examined the relationship between employees' perceptions of their leader in terms of their leadership style and their own thriving, and its consequences for task mastery and proactivity. Specifically, we focus on transformational leadership, which includes both supportive and challenging aspects (e.g., Franke & Felfe, 2011; Schaufeli, 2015), and might therefore be especially suitable for individuals' thriving.

There is considerable evidence that transformational leadership relates positively to employees' affective states and well-being (Bono & Illies, 2006; Montano, Reeske, Franke, &

Hüffmeier, 2016), and employees' learning-related goals and outcomes (e.g., Hamstra, Van Yperen, Wisse, & Sassenberg, 2014). However, a few studies also suggest that transformational leadership drains employees' energy, as it relates positively to strain (Franke & Felfe, 2011; Zineldin & Hytter, 2012). Thus, it seems that transformational leadership has motivating and demanding aspects, and a few studies have identified moderators in the relationship between transformational leadership and strain (e.g., attitudes, Franke & Felfe, 2011; Holstad, Korek, Rigotti, & Mohr, 2014). Building on resource theories (e.g. Hobfoll, 1989; for an overview see Quinn, Spreitzer, & Lam, 2012), we propose that one limiting factor for the potential beneficial role of transformational leadership behavior for thriving should be the followers' energetic resources; that is, emotional exhaustion: exhausted employees should be less able to profit from a transformational leadership style. In addition, we investigate whether the detrimental role of emotional exhaustion on the relationship between perceived transformational leadership and thriving negatively affects followers' task mastery and proactivity. This model is shown in Figure 1. We chose the school context to examine the proposed relationships.

Our study contributes to research on thriving in several ways. First, we seek to expand our understanding of how organizations can enable individuals to thrive at work by examining transformational leadership behaviors. With the focus on transformational leadership, we investigate a leadership style that is both supporting and challenging, and might therefore be especially suitable to foster the joint experience of vitality and learning. Second, we identify emotional exhaustion as one factor that makes it more difficult to benefit from a transformational leadership style, with potentially negative associations with thriving and, in turn, with task mastery and proactivity. Thus, this is the first study which investigates thriving under adverse conditions: being prompted to thrive while one is exhausted. An understanding of the interaction between the social environment (i.e., leadership behavior)

and inter-individual differences (i.e., level of emotional exhaustion) that contribute to or inhibit employee thriving should help organizations create situations that foster better work outcomes. Third, thriving as a growth concept implies change, and we investigate vitality and learning as key markers of personal growth for teachers (Spreitzer et al., 2005; 2012) over the course of a school term with a two-wave study.

Theoretical Background

Thriving

Thriving is defined as “the psychological state [in] which individuals experience both a sense of vitality and a sense of learning at work” (Spreitzer et al., 2005, p. 538). As a positive, activated affect (Shirom, 2004), vitality (or vigor) refers to the subjective experience of energy and liveliness (Peterman & Seligman, 2004; Ryan & Frederick, 1997), while learning as the cognitive component refers to growing through acquiring and utilizing knowledge and skills at work (Spreitzer et al., 2005; 2012). When people thrive, they experience progress and momentum at work (Carmeli & Spreitzer, 2009, p. 169). According to Spreitzer et al. (2005; 2012), it needs both components—vitality and learning—to experience thriving. For example, feeling vital but being caught in routines with no opportunity to learn or learning without feeling vital should not result in thriving. The authors conceptualize thriving as a state rather than as a trait. It is seen as a daily experience (Niessen, Sonnentag, & Sach, 2012; Prem, Ohly, Kubicek, & Korunka, 2016) as opposed to other conceptualizations that define thriving arising from the experience of traumatic or stressful events (Carver, 1998). As thriving is the joint experience of vitality and learning it can be distinguished from other growth-related concepts, such as flow, flourishing, subjective well-being, self-actualization, resilience (Spreitzer et al., 2005), and work engagement (Spreitzer, Lam, & Fritz, 2010). Spreitzer et al. (2005) developed the socially-embedded model at work that describes how stable work characteristics and dynamic resources enable

thriving, consequently fostering well-being and health. Building on the social embeddedness of thriving, we examine the role of transformational leadership in thriving, namely vitality and learning.

Thriving is especially important for teachers (Beltman, Mansfield, & Price, 2011), as learning and development are not only central issues for students but also for teachers. The school context provides teachers several opportunities for thriving, for example to engage in social interactions with colleagues, pupils, parents, the access to knowledge, and a high decision-making discretion (Porath et al., 2011; Spreitzer et al., 2005). Thus, it is interesting to know whether school principals with a transformational leadership style enable their teachers to thrive rather than just to survive in the profession (Beltman et al., 2011). However, at the same time, teachers face several psycho-social stressors and many experience high levels of burnout throughout their professional career (Aloe, Amo, & Shanahan, 2014; Chang, 2009; Hakanen, Bakker, & Schaufeli, 2006; van Dick & Wagner, 2001), which might attenuate the positive relationship between the transformational leadership behaviors of the school principal and teachers' thriving.

Role of Transformational Leadership in Thriving

Transformational leadership is defined as a meaningful and creative exchange between leaders and followers with the aim to guide followers through a vision-driven change (Bass, 1985). Transformational leadership is multi-faceted and comprises four sub-dimensions (Aviolo & Bass, 2004; Bass, 1985), namely idealized influence (attributed and behavior), inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence attributed refers to followers' attributions of power and confidence, and their identification with their leader. Leaders consider the need of others over their own needs, and serve as charismatic role models for their followers, who respond with trust, confidence, and respect. Idealized influence behavior includes behaviors such as: expecting

high performance standards; communicating values; and providing an attractive vision, an organizational mission, and purpose. Inspirational motivation refers to offering meaning, showing optimism and enthusiasm about goals and the future. Intellectual stimulation includes behaviors that stimulate followers' critical reflection processes by questioning assumptions, reframing problems, rethinking routines, and approaching old situations in new ways. Individualized consideration characterizes leaders who are attentive to individuals' needs by providing empathy, a supportive climate, and training and learning opportunities. Research has repeatedly found that these sub-dimensions are highly interrelated, and has been unable to replicate the proposed factor structure (e.g., DeRue, Nahrgang, Wellman, & Humphrey, 2011; Epitropaki, & Martin, 2013; Follesdal & Hagtvet, 2013). Consequently, these researchers often aggregate the sub-dimensions into one construct.

There is considerable evidence that transformational leadership relates negatively to employee strain (e.g., Montano et al., 2016) and, even more important in the present context, relates to positive mental health outcomes such as well-being and psychological functioning (Montano et al., 2016). In line with this research, it is proposed that transformational leadership fosters thriving due to three reasons: satisfying needs, providing meaning, and providing support. First, self-determination theory (SDT; Deci & Ryan, 2000; Gagne & Deci, 2005) proposes that leaders are central in satisfying employees' basic psychological needs (need for autonomy, competence, relatedness), given their influence on task and social characteristics (Bass, 1990; Deci, Connell, & Ryan, 1989; Skakon et al., 2010). By being a charismatic role model (i.e. idealized influence attributed), setting standards and goals for the future (i.e. idealized influence behavior), providing meaning and optimism (i.e., inspirational motivation), taking new perspectives into account (i.e., intellectual stimulation), and giving support and training (i.e., individualized consideration), transformational leaders offer degrees of freedom to choose the way to fulfill tasks, offer opportunities to enhance

followers' knowledge, skills, and abilities, and strengthen the bond between the leader and followers, which makes it likely that followers' needs for autonomy, competence and relatedness are fulfilled. This is supported by Kovjanic, Schuh, Jonas, van Quaquebeke, and van Dick (2012) who showed that transformational leadership behaviors are associated with the satisfaction of these three basic needs.

Research also has shown that teachers' motivation is reduced when their need for autonomy (e.g., Reeve, 2009), competence (e.g., Skaalvik & Skaalvik, 2010) and relatedness (to colleagues) are impaired (Baard, Deci, & Ryan, 2004). In turn, between-person analysis (e.g. Kasser & Ryan, 1999; Sheldon, Ryan, & Reis, 1996) as well as within-person analysis (e.g., Reis, Sheldon, Gable, Roscoe, & Ryan, 2010; Ryan, Bernstein, & Brown, 2010) has found that the satisfaction of needs are related to vitality. In addition, satisfaction of the three basic needs is positively associated with teachers' learning-related outcomes (i.e., learning goal orientation; Janke, Nitsche, & Dickhäuser, 2015). Thus, when school principals lead in a transformational way by offering a shared vision for the school, challenging teachers to rethink instructional processes, establishing expectations for quality pedagogy, being aware of individual needs, and supporting teachers' professional growth (e.g., Leithwood, Leonard, & Sharratt, 1998), then teachers should thrive during a school term. Their work environment provides them opportunities to behave autonomously, to experience competence, and to feel as though they are part of the school team.

Second, transformational leadership might foster thriving by providing meaning for followers' work, which fosters a positive self-concept (Bono & Judge, 2003; Shamir, House, & Arthur, 1993). Arnold, Turner, Barling, Kelloway, and McKee (2007) found that the relationship between transformational leadership and affective well-being was mediated by followers' perceptions of the meaning of their work. Niessen et al. (2012) showed in a day-level study that experiencing work as meaningful predicted within-variations in vitality and

learning; that is, thriving. Third, thriving might be promoted due to the supportive components of transformational leadership. Individual consideration and idealized influence attributed should signal emotional and instrumental support. As supportive behaviors from the supervisor relate to well-being (e.g., Viswesvaran, Sanchez, & Fisher, 1999) and learning (e.g., Colquitt, LePine, & Noe, 2000), it is likely that followers will thrive (Paterson et al., 2014). Based on these theoretical considerations and studies, all facets of transformational leadership should have the potential to foster thriving and, therefore, we do not differentiate between the sub-dimensions of transformational leadership when predicting thriving:

Hypothesis 1: Time 1 perceived transformational leadership relates positively to Time 2 teachers' thriving when controlling for baseline thriving.

Moderating Role of Emotional Exhaustion

To further understand the relationship between transformational leadership and thriving, we took into account follower characteristics (Zhu, Avolio, & Walumbwa, 2009). Specifically, teachers' energetic resources—that is, emotional exhaustion—should moderate the proposed positive relationship. Emotional exhaustion, as a main component of the burnout syndrome, refers to a lack of energy and a lack of emotional resources, which are fully consumed by work (Maslach, Jackson, & Leiter, 1986). As many teachers experience heightened levels of emotional exhaustion (Chang, 2009), the question arises as to whether a challenging leadership style, such as transformational leadership, also fosters thriving for those who feel exhausted due to various stressors in and around the classroom. Related to this, Holstad et al. (2014) found that highly motivated (ambitious) individuals who are willing to invest high levels of effort profit from support provided by transformational leaders more than less ambitious individuals.

Lacking energy resources might hinder employees from benefiting from the many opportunities transformational leadership provides, such as: high performance standards

(idealized influence); a vision, moral, and values (inspirational motivation); rethinking basic assumptions and established routines (intellectual stimulation); and support through training and coaching (individualized consideration). Confronted with a transformational leadership style, exhausted teachers might feel under pressure, increase their effort, and thus experience overload and fatigue when they try to meet the high standards and expectations of their school principal to rethink their pedagogical principles and routines, and to translate the school vision and higher values into action. Consequently, thriving will be limited. This reasoning is supported by Franke and Felfe (2011) who found positive relationships between idealized influence and strain, and by the study of Seltzer, Numerof, and Bass (1998), which revealed a positive association between intellectual stimulation and burnout.

Furthermore, following Hobfoll's (1989) conservation of resources theory (COR), teachers might try to protect their remaining resources when they experience or anticipate resource loss. Consequently, they will not engage in behaviors challenged by their transformational school principal, which makes thriving less likely. In a similar vein, according to the appraisal theory of Lazarus and Folkman (1984), those teachers who experience a lack of (energetic) resources will appraise the opportunities provided by transformational leaders more as a threat rather than a challenge, which is detrimental for thriving. In sum, for exhausted teachers the demanding aspects might outweigh the beneficial, supportive aspects of transformational leadership, which, in turn, should hinder thriving. As such, we predict:

Hypothesis 2: The positive relationship between Time 1 transformational leadership and Time 2 teachers' thriving is moderated by teachers' perceived Time 1 emotional exhaustion such that the relationship is negative when teachers are emotionally exhausted, and the relationship is positive when teachers are less emotionally exhausted (controlling for baseline thriving).

Moderated Mediation

Research has revealed that thriving relates positively to self-rated and supervisor-rated work performance (Porath et al., 2011). We examine two kinds of work performance, namely task mastery (i.e., individuals' perceptions of having successfully mastered the key tasks; Saks & Ashforth, 1997) and proactivity (i.e., self-directed action to anticipate or initiate change in the work system or work roles; Grant & Ashford, 2008). We chose these indicators of work performance because task mastery and proactivity are particularly interesting for managers and organizations, and both outcomes have been frequently studied in relationship to transformational leadership (Belschak & Den Hartog, 2010; Carter et al., 2013; Carter, Armenakis, Feild, & Mossholder, 2013; Den Hartog & Belschak, 2012; Montano et al., 2016). Indeed, there is considerable evidence that transformational leadership predicts task performance (meta-analytic evidence; Carter et al., 2013; Montano et al., 2016) and proactivity (Belschak & Den Hartog, 2010; Den Hartog & Belschak, 2012). Moreover, studies have revealed that well-being—related to thriving—mediates the transformational leadership and task performance relationship (Montano et al., 2016). Research also shows that transformational leaders enhance positive affect (e.g., Bono, Foldes, Vinson, & Muros, 2007), and that positive affect relates positively to proactive behavior (Den Hartog & Belschak, 2007). Following on from this, we propose that thriving mediates the relationship between transformational leadership and the outcome variables (task mastery and proactivity), depending on teachers' levels of emotional exhaustion. As emotional exhaustion makes it difficult for teachers to take on the challenges provided by a transformational leadership style, their thriving should be diminished and, in turn, should limit their task mastery and proactivity. Thus, we propose a moderated mediation model, such that the indirect effect of transformational leadership on both performance outcomes through thriving will depend on the level of teachers' emotional exhaustion. As such, we hypothesize:

Hypothesis 3: Perceived transformational leadership will be related to a) task mastery and b) proactivity via conditional indirect effects, such that the relationship with both aspects of work performance will be moderated by emotional exhaustion and mediated by thriving.

Method

Procedure and Sample

Participants comprised 200 teachers from 112 randomly selected high schools in Germany. We conducted a two-wave online survey over the course of one school term, separated by three months, to increase the likelihood that changes in thriving would be observable. Perceived transformational leadership and emotional exhaustion were assessed at Time 1, whereas thriving, task mastery, and proactivity were assessed at both time points. We sent invitations for participation to randomly chosen school administration offices in several federal states of Germany with a request to forward the information to teachers. Teachers who were interested in participation contacted us and provided their email address. Then, at the first and second measurement occasion, we directly sent them a link to an online questionnaire. Therefore, neither the school principle nor any other person except our research team had insight into teachers' responses.

A total of 277 teachers who were willing to participate provided their contact information and received the first questionnaire six weeks after the start of the school term. We assigned codes for each school and asked participants to report this school-code in the online questionnaire. At Time 1, a total of 225 teachers answered the first questionnaire. Three months after the initial data collection, we sent the second questionnaire, which was filled out by 206 of these teachers (85.0%). Six participants were not included in the final sample because they provided incomplete data at Time 2. Thus, the final sample consisted of 200 teachers (68.5% females). Mean age was 44.97 years ($SD = 10.28$), and mean tenure was

10.31 years ($SD = 8.77$). On average, participants had 14.63 years teaching experience ($SD = 10.03$). Mean working hours per week were 42.05 ($SD = 12.51$). These 200 teachers were from 112 schools. Our sample included one school with six participating teachers, two schools with five teachers each, five schools with four teachers each, 15 schools with three participating teachers each, 28 schools with two teachers each, and 61 schools with one teacher each.

Measures

Scales that were only available in English (thriving and task mastery) were translated in German and then backtranslated in English by two persons fluent in both languages.

Perceived transformational leadership. The transformational leadership style of school principals was rated by teachers using 20 items from the Multifactor Leadership Questionnaire (MLQ-5x; Bass & Avolio, 1997; German translation of Felfe & Goihl, 2002). Transformational leadership includes five dimensions: “My school principal...” idealized influence attributed (e.g., acts in ways that build respect), idealized influence behavior (e.g., specifies the importance of having a strong sense of purpose), exhibits inspirational motivation (e.g., talks optimistically), exhibits individual consideration (e.g., teaches and coaches), and exhibits intellectual stimulation (e.g., suggests new ways of looking at how to complete assignments). The response format of this scale ranged from 1 (never) to 5 (always). Consistent with meta-analytic results (Judge & Piccolo, 2004), we found these lower-order dimensions to be highly correlated ($r = .68$ to $.83$) and, thus, combined the five subscales into a single higher-order factor (see also Bass, Avolio, Jung, & Berson, 2003; Bono & Judge, 2003, 2004). For measurement issues, we had to exclude one item of the idealized influence behavior subscale because of a low-factor loading. The single-factor (second-order) confirmatory factor analysis (CFA) with 19 items offered an acceptable fit, $\chi^2(N = 147) = 410.21$, $p < .01$ (comparative fit index [CFI] = 0.91; root-mean-square error of

approximation [RMSEA] = 0.09). The Cronbach's alpha coefficient was .96.

Emotional exhaustion. Emotional exhaustion was measured with five items of the Maslach Burnout Inventory (Maslach et al., 1986; German version of Büssing & Perrar, 1992). A sample item is "I feel emotionally drained from my work". All items were scored on a 5-point rating scale (1 = not at all, 5 = strongly agree). Cronbach's alpha was .85.

Thriving. Thriving was assessed with Porath et al.'s (2000) scale that combines four items to measure vitality (e.g., "I feel alive and vital") and four items to measure learning (e.g., "I find myself learning often"). Responses were given on a scale ranging from 1 = not at all to 7 = strongly agree. Porath et al. (2012) confirmed in two samples the 2-dimensional structure of thriving, and the composite score. They provided convergent and discriminant validity of thriving in relationship to positive and negative affect, learning and performance goal orientations, proactive personality, and core self-evaluations. Construct validity was further supported by explaining significant variance above and beyond job satisfaction and organizational commitment. In the present study, reliability coefficients for vitality were .92 at Time 1 and .94 at Time 2, and for learning they were .91 at Time 1 and .92 at Time 2. As thriving is conceptualized as the joint experience of vitality and learning we combined the two dimensions to form a composite score, consistent with the validation studies of Porath et al. (2012). Cronbach's alpha at Time 1 was .89 and .90 at Time 2.

Task mastery. We measured task mastery with four items from Williams and Anderson's (1991) scale. A sample item is "I meet the formal requirements of the job". The response scale ranged from 1 (not at all) to 5 (a great deal). Internal consistency at Time 1 and Time 2 were .79 and .74 respectively.

Proactivity. Proactivity was assessed using Frese, Fay, Hilburger, Len and Tag's (1997) personal initiative scale, with all items using response anchors of 1 = not at all to 5 = a great deal. Sample items include the following: "Whenever something goes wrong, I search

for a solution immediately”. Internal consistency at Time 1 was .80 and .82 at Time 2.

Construct validity. Using confirmatory factor analysis (CFA) we distinguished between thriving and emotional exhaustion by modeling thriving as a second-order factor (in which thriving is measured by sub-factors of vitality and learning) and a separate factor emotional exhaustion. This model offered an acceptable fit, $\chi^2(df = 62) = 164.86, p < .001$ (CFI = 0.95; RMSEA = 0.09), and outperformed both a potential competing 1-factor solution ($\chi^2(df = 65) = 817.25, p < .001$; CFI = 0.62; RMSEA = 0.24, increase in χ^2 vs 2 factor model = 652.39 on 3 df, $p < .001$) and an alternative 2-factor model that combines the vitality component of the thriving scale with exhaustion on one factor and learning on the other ($\chi^2(df = 64) = 354.85, p < .001$; CFI = 0.85; RMSEA = 0.15).

In addition, we tested the factorial structure of thriving, task mastery, and proactivity at Time 2. The proposed 3-factor model provided an adequate fit to the data ($\chi^2(df = 147) = 294.60, p < .001$; CFI = 0.93; RMSEA = 0.07) and outperformed a potential competing 2-factor model combining both task mastery and proactivity items in measuring one factor, and thriving items measuring the other ($\chi^2(df = 149) = 445.30, p < .001$; CFI = 0.86; RMSEA = 0.10, increase in χ^2 vs 3 factor model = 150.7 on 2 df, $p < .001$).

Results

Means, standard deviations (SDs), and zero-order correlations are presented in Table 1. The hypothesized path model with the conditional indirect effects was tested using Mplus (Muthén & Muthén, 2012). As in our sample were teachers who came from the same (51 schools with at least two teachers each) as well as different schools (61 schools with one teacher each), we had to consider the potential non-independence of observations in our analyses. The relatively minor and piecemeal degree of this nesting - such that a majority of schools had just one teacher within the sample, made multilevel analyses less appropriate (McNeish, Stapleton, & Silverman, 2016). Instead, when running our path analysis model in

Mplus, we tested parameter estimates using cluster-adjusted standard errors (Asparouhov, 2005; McNeish et al., 2016) to minimize the risk of type I errors due to this non-independence.

When testing whether indirect effects were non-zero we computed bias-corrected bootstrapped 95% confidence intervals, as recommended by Hayes (2013). 10,000 bootstrap re-samples were used in each instance.

In the moderated mediation model, thriving at Time 2 was entered as a mediator variable, perceived transformational leadership (Time 1) as a predictor variable, emotional exhaustion (Time 1) as the moderator variable, and task mastery (Time 2) and proactivity (Time 2) as outcome variables. As controls, we included thriving, task mastery, and proactivity at Time 1. All variables were z-standardized prior to analyses, except the respective outcome variables. We built the interaction term by multiplying the z-standardized variables perceived transformational leadership and emotional exhaustion.

Hypothesis 1 proposed that perceived transformational leadership (Time 1) relates to an increase of thriving (Time 2) when controlling for thriving at Time 1. This hypothesis was not supported (est. = -0.055, SE = 0.053, $p = .294$; see Table 2). However, the results showed that emotional exhaustion moderated the relationship between perceived transformational leadership and thriving (est = -0.172, SE = 0.058, $p = .003$; see Table 2).

The moderator (emotional exhaustion) was slightly left skewed in distribution. Therefore, when choosing a range of values of emotional exhaustion for: i) probing and plotting its moderating effect on the path from transformational leadership to thriving, ii) testing simple slopes, and iii) calculating conditional indirect effects, we used percentile values of emotional exhaustion (5%, 25%, 50%, 75%, 95%) rather than the mean and +/- 1 SD from the mean.

At a relatively low level of emotional exhaustion (standardized emotional exhaustion

= -1.465, the 5% sample percentile, which equates to a value of 1.1 on the original emotional exhaustion scale) the effect of perceived transformational leadership on thriving was beneficial and significantly different from zero (simple slope= .193, SE = .086, $p = .025$; see Figure 2). Conversely, when emotional exhaustion was higher (standardized emotional exhaustion = 0.658, the 75% sample percentile, which equates to a value of 3.0 on the original scale) and very high (standardized emotional exhaustion = 1.713, the 95% sample percentile, which equates to a value of 4.0 on the original scale) the effect of perceived transformational leadership on thriving was negative and significantly different from zero (high levels of emotional exhaustion: simple slope= -.158, SE = .073, $p = .030$; very high levels of emotional exhaustion: simple slope= -.332, SE = .122, $p = .006$). Thus, the results supported Hypothesis 2.

To test for moderated mediation, we examined if the proposed conditional effects of perceived transformational leadership (Hypothesis 3) on task mastery and proactivity via thriving across different levels of exhaustion were statistically different from zero (see Table 3). Again, we tested user-defined values of the moderator. For proactivity the bootstrapping confidence interval of the indirect effect at a very low level of emotional exhaustion and medium to very high levels of emotional exhaustion did not include zero (see Table 3). Thus, among those teachers with a very low level of emotional exhaustion, the indirect effect was positive, meaning that perceived transformational leadership was related to an increase in thriving, which, in turn, related to the perception of more proactivity. Among those with a medium and higher level of emotional exhaustion, the indirect effect was negative: perceived transformational leadership was associated with a decrease in thriving and, in turn, with a decrease in proactivity. However, we found no significant conditional indirect effects of perceived transformational leadership on task mastery through thriving via emotional exhaustion. Therefore, Hypothesis 3 was only partly supported.¹

Supplementary Analyses

We explored the extent to which the relationships between perceived transformational leadership and thriving were different for the four dimensions of perceived transformational leadership. We ran the same analyses with each dimension of perceived transformational leadership. The results revealed that none of the dimensions had significant associations with thriving. The interaction between each dimensions of perceived transformational leadership and emotional exhaustion predicting thriving were significant, except for idealized influence attributed.

Discussion

Transformational leadership has challenging and supporting aspects for employees and is therefore supposed to be especially supportive for thriving. In the present study, we found that this was the case—but only for (a few) teachers with a very low level of emotional exhaustion. When teachers were more emotionally exhausted, perceived transformational leadership was associated with decreased thriving across the school term, which, in turn, was also related to less proactivity but not to less task mastery. The results extend our knowledge about how managers, specifically school principals, can enable teachers to thrive at work by using a transformational leadership style. In particular, it is important to take teachers' energetic resources into account.

We did not find direct relationships between perceived transformational leadership and thriving. Transformational leadership can be seen as a “cocktail” of supporting, challenging, and demanding aspects that motivate and satisfy needs, but also have the potential to cause strain (Franke & Felfe, 2011; Holstad et al., 2014). Therefore, it might be that, for some individuals, the positive and negative impact of transformational leadership on the joint experience of vitality and learning cancel one another out.

Our results might support the notion that the benefits of a transformational leadership

style for personal growth also depend on additional factors, such as individuals' resources. The study revealed that only at very low level of emotional exhaustion (the 5% sample percentile, which, in our sample, equates to a value of 1.1 on the original emotional exhaustion scale) enhance the beneficial properties of transformational leadership in promoting thriving, but even moderately high levels of emotional exhaustion have the reverse effect (the 75% sample percentile, which equates to a value of 3.0 on the original scale and the 95% sample percentile, which equates to a value of 4.0 on the original scale). With increasing emotional exhaustion teachers, might appraise challenges more as a threat, having to enhance their coping efforts to deal with the demands (Lazarus & Folkman, 1984), and might have not enough resources left to bring the leader's vision into action (Hobfoll, 1989). In these cases, teachers do not feel vital, and learning and development make room for accomplishing just the necessary requirements of the job. Previous research has found that only single dimensions of transformational leadership, such as idealized influence (Franke & Felfe, 2011) or intellectual stimulation (Seltzer et al., 1998) are related to strain. However, demanding aspects can be found in almost all dimensions of transformational leadership (even in individual consideration, which includes opportunities for training and coaching). Our additional analyses showed that all dimensions, except idealized influence attributed, which refers to role modeling and followers' trust and respect, interacted significantly with emotional exhaustion. It might be that vitality, as a positive, activated affect, and learning, as an energy-consuming activity, are especially susceptible to potentially demanding aspects of transformational leadership compared to measures of strain and burnout.

The present study also showed that perceived transformational leadership is related to a decrease in proactivity through compromised thriving when emotional exhaustion is moderate to very high. In addition, for almost non-exhausted teachers, transformational leadership related to an increase in thriving and, in turn, to the perception to self-initiate

problem solving (i.e., proactivity). These results are in line with other studies showing that thriving relates to important work-related outcomes, and is not only an end in itself. Although the results pointed to the same direction, the 95% confidence interval of the conditional indirect effect with respect to task mastery included zero. We operationalized task mastery with in-role behavior, which reflects the fulfillment of standard task requirements that are formally recognized as part of their job. As self-starting behavior, proactivity might be more energy-consuming and therefore more affected by a decreased sense of thriving compared to the “regular” performance on standard work activities.

Theoretical and Practical Implications

Theoretically, our findings suggest that boundary conditions in the promotion of thriving have to be considered. In their socially-embedded model of thriving, Spreitzer et al. (2005) assume that work characteristics and resources produced in the doing of work fuel agentic behaviors that enable thriving. Moreover, the authors also propose reverse relationships between thriving, agentic behaviors, and resources. In a more recent framework, the integrative model of human growth at work (Spreitzer & Porath, 2013), it is assumed that thriving depends on the satisfaction of basic psychological needs (need for autonomy, competence, and relatedness). Our results suggest that resources and opportunities for need satisfaction provided by transformational leadership can only be exploited for personal growth when individuals have enough (energy) resources left. Therefore, it is worthwhile to include demands, stress, or strain as boundary conditions in models of human growth at work.

Also from a practical perspective, it is important to consider followers’ energy resources to avoid further resource loss and resulting absenteeism, with negative consequences for teaching and learning in the classroom. Therefore, to limit further resource loss and to give followers the opportunity to benefit from a transformational leadership style

it might be important to focus on supportive transformational leadership behaviors more than on the demanding aspects, or to combine the transformational leadership style with other leadership behaviors, such as with restructuring tasks and clarifying roles (Kranabetter & Niessen, 2016). Research in the school context indicates that a combination of a transformational leadership style with leadership behaviors that improve conditions of classroom teaching and learning by, for example, setting educational goals and planning the curriculum, relates positively to school outcomes by building teachers' skills and capabilities (e.g., instructional leadership; Day, Gu, & Sammons, 2016; Marks & Printy, 2003).

Strengths, Limitations, and Future Research

Our study has several strengths, including the investigation of thriving throughout a school term with two points of measurement, the high response rates, and a sample of teachers from different high schools to increase generalizability of our findings. The research design allowed controlling for baseline measures of thriving, task mastery, and proactivity. However, the study also has several limitations. First, we used self-report measures for all constructs. Thriving, emotional exhaustion, and also followers' perceptions of leaders' transformational behaviors should be assessed via self-report, but at least for both work performance variables, other-ratings and objective performance data would be preferable to reduce common method bias. Nevertheless, we included baseline measures into the models and were therefore able to control for stable third variables (Zapf, Dormann, & Frese, 1996). Moreover, we focused mainly on interactive effects between transformational leadership and emotional exhaustion to predict changes in thriving, task mastery, and proactivity. These interactions are less affected by common method bias (Evans, 1985). Second, a two-wave design does not allow us to conclude that there is true change between Time 1 and Time 2, even when controlling for the outcome at Time 1 (Chan, 1998; Ployhart and Vandenberg, 2010; Singer & Willett, 2003). In this case, true change and measurement error are

confounded. Thus, future research should take this into account and should assess thriving at least at three measurement points (Chan, 1998). Related to this point, the mediator and outcome variables should also be assessed at different points in time. Finally, non-dependence of observations might be the case for at least a part of our sample. However, by using cluster-adjusted errors we took this potential problem into account.

Conclusion

This study highlights the importance of considering teachers' energy resources (i.e., emotional exhaustion) when examining the relationship between perceived transformational leadership of school principals and teachers' thriving over a school term. The results suggest that when teachers feel exhausted, a school principal's transformational leadership style relates to a decrease in thriving and, in turn, to less proactivity. For those who reported a very low level of emotional exhaustion, transformational leadership is associated with an increase in thriving, which is accompanied with more proactivity. The study also suggests it is important to consider "the negative" (stress and strain) in models of human growth at work.

References

- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, 26(1), 101-126. doi:10.1007/s10648-013-9244-0
- Arnold, K. A., Turner, N., Barling, J., Kelloway, E. K., & McKee, M. C. (2007). Transformational leadership and psychological well-being: The mediating role of meaningful work. *Journal of Occupational Health Psychology*, 12(3), 193-203. doi:10.1037/1076-8998.12.3.193
- Asparouhov, T. (2005). Sampling weights in latent variable modeling. *Structural Equation Modeling*, 12, 411-434.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Third edition manual and sampler set*. Redwood City, CA: Mind Garden.
- Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, 34(10), 2045-2068. doi:10.1111/j.1559-1816.2004.tb02690.x
- Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications*. New York: Free Press.
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, 13(3), 26-40. doi:10.1016/0090-2616(85)90028-2
- Bass, B. M. & Avolio, B. J. (1997). *Full range leadership development – Manual for the multifactor leadership questionnaire*. Redwood City, CA: Mind Garden.
- Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology*, 88(2), 207-218. doi:10.1037/0021-9010.88.2.207

- Bauer, D. J. & Curran, P. J. (2005). Probing interactions in fixed and multilevel regression: inferential and graphical techniques. *Multivariate Behavioral Research*, 40, 373-400.
doi:10.1207/s15327906mbr4003_5
- Belschak, F. D., & Den Hartog, D. N. (2010). Pro-self, prosocial, and pro-organizational foci of proactive behaviour: Differential antecedents and consequences. *Journal of Occupational and Organizational Psychology*, 83(2), 475-498.
doi:10.1348/096317909x439208
- Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185-207.
doi:10.1016/j.edurev.2011.09.001
- Bono, J. E., Foldes, H. J., Vinson, G., & Muros, J. P. (2007). Workplace emotions: The role of supervision and leadership. *Journal of Applied Psychology*, 92(5), 1357-1367.
doi:10.1037/0021-9010.92.5.1357
- Bono, J. E., & Ilies, R. (2006). Charisma, positive emotions and mood contagion. *The Leadership Quarterly*, 17(4), 317-334. doi:10.1016/j.leaqua.2006.04.008
- Bono, J. E., & Judge, T. A. (2003). Self-concordance at work: Toward understanding the motivational effects of transformational leaders. *Academy of Management Journal*, 46(5), 554-571. doi:10.2307/30040649
- Büssing A., & Perrar K.M. (1992). Die Messung von Burnout. Untersuchung einer deutschen Fassung des Maslach Burnout Inventory (MBI-D) (Measuring burnout: A study of German version of the Maslach Burnout Inventory (MBI-D). *Diagnostica*, 38, 328-353.
- Carmeli, A., & Spreitzer, G. M. (2009). Trust, connectivity, and thriving: Implications for innovative behaviors at work. *The Journal of Creative Behavior*, 43(3), 169-191.
doi:10.1002/j.2162-6057.2009.tb01313.x

- Carter, M. Z., Armenakis, A. A., Feild, H. S., & Mossholder, K. W. (2013). Transformational leadership, relationship quality, and employee performance during continuous incremental organizational change. *Journal of Organizational Behavior*, 34(7), 942-958. doi:10.1002/job.1824
- Carver, C. S. (1998). Resilience and thriving: Issues, models, and linkages. *Journal of Social Issues*, 54(2), 245-266. doi:10.1111/0022-4537.641998064
- Chan, D. (1998). The conceptualization and analysis of change over time: An integrative approach incorporating longitudinal mean and covariance structures analysis (LMACS) and multiple indicator latent growth modeling (MLGM). *Organizational Research Methods*, 1(4), 421-483.
- Chang, M. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review*, 21(3), 193-218.
doi:10.1007/s10648-009-9106-y
- Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology*, 85(5), 678-707. doi:10.1037/0021-9010.85.5.678
- Day, C., Gu, Q., & Sammons, P. (2016). The impact of leadership on student outcomes: How successful school leaders use transformational and instructional strategies to make a difference. *Educational Administration Quarterly*, 52(2), 221-258.
doi:10.1177/0013161x15616863
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74(4), 580-590. doi:10.1037/0021-9010.74.4.580
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
doi:10.1207/S15327965PLI1104_01

- Den Hartog, D. N. & Belschak, F. D. (2007). Personal initiative, commitment and affect at work. *Journal of Occupational and Organizational Psychology*, 80(4), 601-622. doi:10.1348/096317906x171442.
- Den Hartog, D. N., & Belschak, F. D. (2012). When does transformational leadership enhance employee proactive behavior? The role of autonomy and role breadth self-efficacy. *Journal of Applied Psychology*, 97(1), 194-202. doi:10.1037/a0024903
- DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, 64(1), 7-52. doi:10.1111/j.1744-6570.2010.01201.x
- Epitropaki, O., & Martin, R. (2013). Transformational–transactional leadership and upward influence: The role of Relative Leader–Member Exchanges (RLMX) and Perceived Organizational Support (POS). *Leadership Quarterly*, 24(2), 299-315. doi:10.1016/j.leaqua.2012.11.007
- Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes*, 36(3), 305-323. doi:10.1016/0749-5978(85)90002-0
- Føllesdal, H., & Hagtvet, K. (2013). Does emotional intelligence as ability predict transformational leadership? A multilevel approach. *The Leadership Quarterly*, 24(5), 747-762. doi:10.1016/j.leaqua.2013.07.004
- Franke, F., & Felfe, J. (2011). Diagnose gesundheitsförderlicher Führung – Das Instrument “Health-oriented Leadership”. *Fehlzeiten-Report 2011*, 3-13. doi:10.1007/978-3-642-21655-8_1
- Felfe, J. & Goihl, K. (2002). Deutsche überarbeitete und ergänzte Version des „Multifactor Leadership Questionnaire“ (MLQ) (German version of the Multifactor Leadership Questionnaire) . In A. Glöckner-Rist (Ed.). *ZUMA-Informationssystem. Elektronisches*

Handbuch sozialwissenschaftlicher Erhebungsinstrumente. Version 5.00. Mannheim:
Zentrum für Umfragen, Methoden und Analysen.

- Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational and Organizational Psychology*, 70(2), 139-161. doi:10.1111/j.2044-8325.1997.tb00639.x
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, 26(4), 331-362. doi:10.1002/job.322
- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in Organizational Behavior*, 28, 3-34. doi:10.1016/j.riob.2008.04.002
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43(6), 495-513.
doi:10.1016/j.jsp.2005.11.001
- Hamstra, M. W., Van Yperen, N. W., Wisse, B., & Sassenberg, K. (2014). Transformational and transactional leadership and followers' achievement goals. *Journal of Business and Psychology*, 29(3), 413-425. doi:10.1007/s10869-013-9322-9
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513-524. doi:10.1037/0003-066x.44.3.513
- Holstad, T. J., Korek, S., Rigotti, T., & Mohr, G. (2014). The relation between transformational leadership and follower emotional strain: The moderating role of professional ambition. *Leadership*, 10(3), 269-288. doi:10.1177/1742715013476083
- Janke, S., Nitsche, S., & Dickhäuser, O. (2015). The role of perceived need satisfaction at work for teachers' work-related learning goal orientation. *Teaching and Teacher*

- Education, 47, 184-194. doi:10.1016/j.tate.2015.01.009
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768. doi:10.1037/0021-9010.89.5.755
- Kasser, V. G., & Ryan, R. M. (1999). The relation of psychological needs for autonomy and relatedness to vitality, well-being, and mortality in a nursing home. *Journal of Applied Social Psychology*, 29(5), 935-954. doi:10.1111/j.1559-1816.1999.tb00133.x
- Kovjanic, S., Schuh, S. C., Jonas, K., Van Quaquebeke, N., & Van Dick, R. (2012). How do transformational leaders foster positive employee outcomes? A self-determination-based analysis of employees' needs as mediating links. *Journal of Organizational Behavior*, 33(8), 1031-1052. doi:10.1002/job.1771
- Kranabetter, C., & Niessen, C. (2016). How managers respond to exhausted employees. *Journal of Personnel Psychology*, 15(3), 106-115. doi:10.1027/1866-5888/a000157
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Leithwood, K., Leonard, L., & Sharratt, L. (1998). Conditions fostering organizational learning in schools. *Educational Administration Quarterly*, 34(2), 243-276. doi:10.1177/0013161x98034002005
- Marks, H. M., & Printy, S. M. (2003). Principal leadership and school performance: An integration of transformational and instructional leadership. *Educational Administration Quarterly*, 39(3), 370-397. doi:10.1177/0013161x03253412
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1986). *Maslach Burnout Inventory*. Palo Alto.
- Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2016). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior*. doi:10.1002/job.2124

Muthén, L. K., & Muthén, B. O. (2012). *Mplus user's guide* (7th ed.). Los Angeles, CA:

Muthén & Muthén.

McNeish, D., Stapleton, L. M., & Silverman, R. D. (2016). On the unnecessary ubiquity of hierarchical linear modeling. *Psychological Methods*, 22, 114-140.

doi:10.1037/met0000078

Niessen, C., Sonnentag, S., & Sach, F. (2012). Thriving at work – A diary study. *Journal of Organizational Behavior*, 33(4), 468-487. doi:10.1002/job.763

Paterson, T. A., Luthans, F., & Jeung, W. (2014). Thriving at work: Impact of psychological capital and supervisor support. *Journal of Organizational Behavior*, 35(3), 434-446.

doi:10.1002/job.1907

Ployhart, R. E., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design, and analysis of change. *Journal of Management*, 36(1), 94-120.

doi:10.1177/0149206309352110

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42, 185-227.

Porath, C., Spreitzer, G., Gibson, C., & Garnett, F. G. (2012). Thriving at work: Toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior*, 33(2), 250-275. doi:10.1002/job.756

doi:10.1002/job.756

Prem, R., Ohly, S., Kubicek, B., & Korunka, C. (2016). Thriving on challenge stressors? Exploring time pressure and learning demands as antecedents of thriving at work.

Journal of Organizational Behaviour. doi:10.1002/job.2115

Quinn, R. W., Spreitzer, G. M., & Lam, C. F. (2012). Building a sustainable model of human energy in organizations: Exploring the critical role of resources. *Academy of Management Annals*, 6(1), 337-396. doi:10.1080/19416520.2012.676762

doi:10.1080/19416520.2012.676762

- Reeve, J. (2009). Why teachers adopt a controlling motivating style toward students and how they can become more autonomy supportive. *Educational Psychologist*, 44(3), 159-175. doi:10.1080/00461520903028990
- Reis, H.T., Sheldon, K.M., Gable, S.L., Roscoe, J., & Ryan, R.M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin*, 26, 419-435.
- Ryan, R. M., Bernstein, J. H., & Brown, K. W. (2010). Weekends, work, and well-being: Psychological need satisfactions and day of the week effects on mood, vitality, and physical symptoms. *Journal of Social and Clinical Psychology*, 29(1), 95-122. doi:10.1521/jscp.2010.29.1.95
- Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65(3), 529-565. doi:10.1111/j.1467-6494.1997.tb00326.x
- Saks, A. M., & Ashforth, B. E. (1997). Socialization tactics and newcomer information acquisition. *International Journal of Selection and Assessment*, 5(1), 48-61. doi:10.1111/1468-2389.00044
- Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. *Career Development International*, 20(5), 446-463. doi:10.1108/CDI-02-2015-0025
- Seltzer, J., Numerof, R. E., & Bass, B. M. (1989). Transformational leadership: Is it a source of more burnout and stress? *Journal of Health and Human Resources Administration*, 174-185. Stable URL: <http://www.jstor.org/stable/25780396>
- Shamir, B., House, R. J., & Arthur, M. B. (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4(4), 577-594. doi:10.1287/orsc.4.4.577
- Sheldon, K. M., Ryan, R., & Reis, H. T. (1996). What makes for a good day? Competence

and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22(12), 1270-1279. doi:10.1177/01461672962212007

Shirom, A. (2004). Feeling vigorous at work? The construct of vigor and the study of positive affect in organizations. In P. L. Perrewé, D. C. Ganster, P. L. Perrewé, D. C. Ganster (Eds.), *Emotional and physiological processes and positive intervention strategies* (pp. 135-164). US: Elsevier Science/JAI Press.

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis*. doi:10.1093/acprof:oso/9780195152968.001.0001

Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059-1069. doi:10.1016/j.tate.2009.11.001

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. doi:10.1080/02678373.2010.495262

Sonenshein, S., Dutton, J. E., Grant, A. M., Spreitzer, G., & Sutcliffe, K. M. (2013). Growing at work: Employee's interpretations of progressive self-change in organizations. *Organization Science* 24(2), 552-570. doi:10.1287/orsc.1120.0749

Spreitzer, G. M., Lam, C. F., & Fritz, C. (2010). Engagement and human thriving: Complementary perspectives on energy and connections to work. In A. B. Bakker, A. B. Bakker (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 132-146). New York: Psychology Press.

Spreitzer, G., & Porath, C. (2013). Self-determination as nutriment for thriving: Building an integrative model of human growth at work. In M. Gagne (Ed.), *Oxford handbook of*

- work engagement, motivation, and self-determination theory (pp. 245-258). USA: Oxford University Press.
- Spreitzer, G., Porath, C. L., & Gibson, C. B. (2012). Toward human sustainability. *Organizational Dynamics*, 41(2), 155-162. doi:10.1016/j.orgdyn.2012.01.009
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science*, 16(5), 537-549. doi:10.1287/orsc.1050.0153
- Van Dick, R., & Wagner, U. (2002). Social identification among school teachers: Dimensions, foci, and correlates. *European Journal of Work and Organizational Psychology*, 11(2), 129-149. doi:10.1080/13594320143000889
- Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54(2), 314-334. doi:10.1006/jvbe.1998.1661
- Wallace, J. C., Butts, M. M., Johnson, P. D., Stevens, F. G., & Smith, M. B. (2013). A multilevel model of employee innovation: Understanding the effects of regulatory focus, thriving, and employee involvement climate. *Journal of Management*, 42(4), 982-1004. doi:10.1177/0149206313506462
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601-617. doi:10.1177/014920639101700305
- Zapf, D., Dormann, C., & Frese, M. (1996). Longitudinal studies in organizational stress research: A review of the literature with reference to methodological issues. *Journal of Occupational Health Psychology*, 1(2), 145-169. doi:10.1037/1076-8998.1.2.145
- Zhu, W., Avolio, B. J., & Walumbwa, F. O. (2009). Moderating role of follower characteristics with transformational leadership and follower work engagement. *Group*

& Organization Management, 34(5), 590-619. doi:10.1177/1059601108331242

Zineldin, M., & Hytter, A. (2012). Leaders' negative emotions and leadership styles influencing subordinates' well-being. *International Journal of Human Resource Management*, 23(4), 748-758. doi:10.1080/09585192.2011.606114

Footnote

¹ In addition, we have reanalyzed the data and controlled for teachers' experience and workload. The results are comparable with the model without these control variables.

Table 1

Means, Standard Deviations, and Correlations

Variable	M	SD	1	2	3	4	5	6	7	8
1 Perceived transformational leadership (T1)	3.25	0.91	-							
2 Emotional exhaustion (T1)	2.39	0.92	-.047	-						
3 Thriving (T1)	4.77	1.12	.134	-.512**	-					
4 Task mastery (T1)	4.28	0.50	.092	-.283**	.258**	-				
5 Proactivity (T1)	3.74	0.55	.103	-.071	.293**	.335**	-			
6 Thriving (T2)	4.66	1.17	.026	-.342**	.663**	.185**	.254**	-		
7 Task mastery (T2)	4.17	0.40	-.053	-.215**	.074	.479**	.271**	.150*	-	
8 Proactivity (T2)	3.75	0.55	.057	-.072	.225**	.251**	.774**	.289**	.401**	-

Note: N = 200; * $p < .05$; ** $p < .01$.

Table 2

Estimated Coefficients, Standard Errors, and Variance Explained in the the Moderated Mediation Model

Predictor	Thriving (T2)		Task mastery (T2)		Proactivity (T2)	
	Estimate	SE	Estimate	SE	Estimate	SE
Constant	-0.008	0.050	4.177***	0.025	3.753	0.024
Thriving (T1)	0.675***	0.064	-0.059 ^a	0.036	-0.055	0.035
Task mastery (T1)	0.034	0.056	0.199***	0.029		
Proactivity (T1)	0.056	0.067			0.401***	0.025
Perceived transformational leadership	-0.055	0.053	-0.033	0.027	-0.005	0.026
Emotional exhaustion	0.020	0.056				
Perceived transformational leadership x emotional exhaustion	-0.172**	0.056				
Thriving (T2)			0.063 ^a	0.037	0.093*	0.044
R ²	0.473***	0.061	0.254***	0.061	0.597***	0.058
F	8.540		4.179		10.354	

Note: All tests are two-tailed ^a $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

Table 3

Bootstrapping Results for Test of Conditional Indirect Effects of Perceived Transformational Leadership on Task Mastery and Proactivity, via Thriving, at Very Low to Very High Values of the Moderator (Emotional Exhaustion): Percentiles (5%, 25%, 50%, 75%, 95%)

Dependent variable	Emotional exhaustion (T1)	Conditional indirect effect	SE	Lower 95% CI	Upper 95% CI
Task mastery (T2)	-1.465 (very low)	.012	.009	.000	.037
	-0.862 (low)	.006	.005	-.001	.022
	0.007 (medium)	-.004	.004	-.016	.002
	0.658 (high)	-.011	.008	-.032	.000
	1.713 (very high)	-.022	.015	-.061	.000
Proactivity (T2)	-1.465 (very low)	.018	.011	.002	.050
	-0.862 (low)	.009	.006	.000	.030
	0.007 (medium)	-.005	.006	-.022	-.003
	0.658 (high)	-.016	.010	-.042	-.001
	1.713 (very high)	-.033	.019	-.080	-.004

Note. Percentiles: 5% (-1.465), 25% (-.0862), 50% (.007), 75% (.658), 95% (1.713). 10,000 bootstrap samples. CIs are two-tailed.

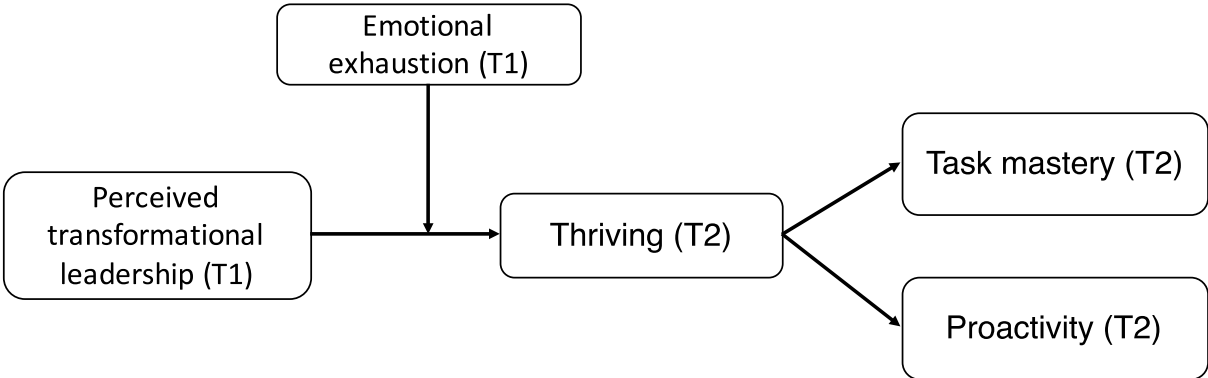


Figure 1. Conceptual model.

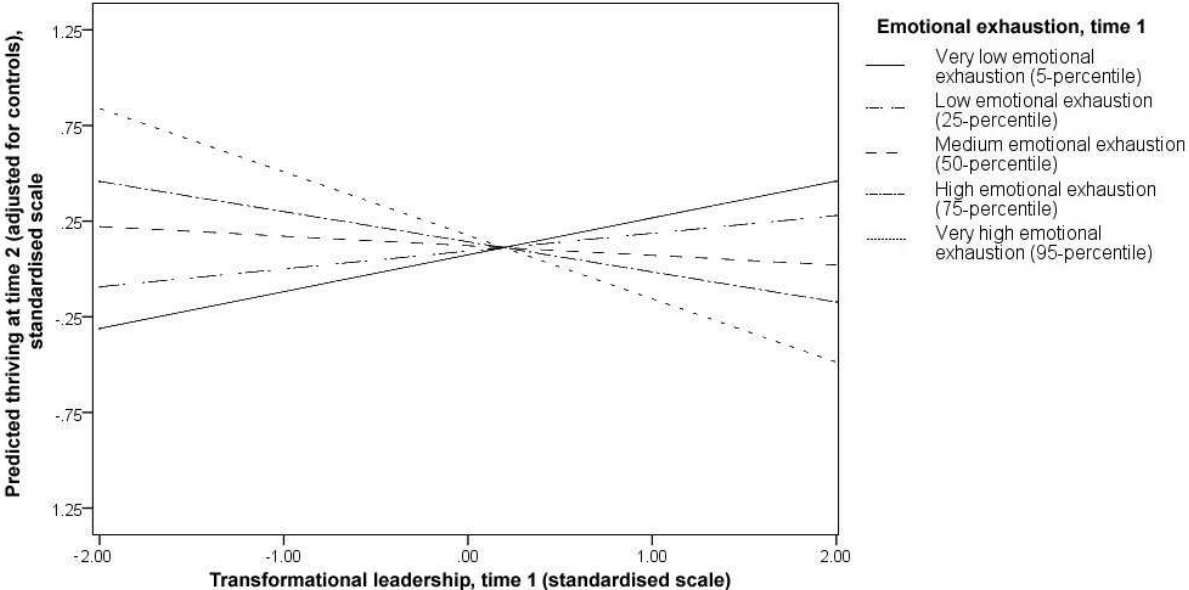


Figure 2. The relationships between perceived transformational leadership and thriving at Time 2 (controlled for thriving, task mastery, and proactivity at Time 1 at very low to very high values of the moderator (emotional exhaustion): Percentiles (5%, 25%, 50%, 75%, 95%)