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## Leader behavior as a determinant of health at work

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The extent to which leadership influences employee health and the processes that underlie its effects are not well understood at present. With the aim of filling this gap, we review four distinct forms of leader behavior (task-oriented, relationship-oriented, change-oriented, and passive/destructive) and clarify the different ways in which these can be expected to have a bearing on employee health. Next, we present a model that integrates and extends these insights. This model describes five pathways through which leader behavior can influence the health of organizational members and summarizes what we know about the most important determinants, processes (mediators) and moderators of these relationships. These involve leaders engaging in person-focused action, system- or team-focused action, action to moderate the impact of contextual factors, climate control and identity management, and modelling. Finally, we identify important gaps and opportunities in the literature that need to be addressed in future research. A key conclusion is that while much has been done to explore some key pathways between leadership and health, others remain underexplored. We also outline how future research might address these in the context of a more expansive theoretical, empirical and practical approach to this emerging field of research.

**Key words:** leadership, health, performance, culture (JEL: I10, I30, M14)

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## **Leader behavior as a determinant of health at work: Specification and evidence of five key pathways**

Health promotion centers on the process of enabling people to increase control over, and to improve, their health. The present paper, and the special issue that it introduces, is concerned with one key question: *What is the role of leadership in this process?* Recent research suggests that leadership is an important determinant of various indicators of employee well-being, including sickness absences and general health (Kuoppala, Lamminpaa, Liira, & Vainio, 2008). Further, there is also evidence that the health of employees can be promoted through specific leader behaviors and leadership styles (Haslam, Reicher, & Platow, 2011; Skakon, Nielsen, Borg, & Guzman, 2010). It has been found, for example, that safety behavior can be improved by leaders because transactional leadership ensures compliance with safety rules and regulations at work and transformational leadership motivates employees to participate in health- and safety-related behaviors (e.g., making safety related suggestions; participating in relevant training; Clark, 2013). However, as things stand, the *extent* to which leadership may influence employee health and the various *processes* that underlie this relationship are not well understood.

With the aim of filling this lacuna in the literature, the *German Journal of Human Resource Management* invited us to edit a special issue on “Health Promotion through Leadership”. Believing this to be a timely and important topic, we agreed to take this task on and then set about encouraging key researchers in the field to contribute to the enterprise by submitting research papers that explore various aspects of the relationship between leadership and employee health.

Our ultimate goal here was to publish papers that improve our theoretical and practical understanding of defining issues for the field. From the papers that we received, five research objectives emerge as particularly important. First, to understand how and why leadership behavior in organizations promotes (or else harms) the health of employees (Franke, Felfe, & Pundt, 2014; Gregersen, Vincent-Höper, & Nienhaus, 2014; Winkler, Busch, Clasen, & Fohwinkel, 2014; Walsh, Dupré, & Arnold, 2014; Rivkin, Diestel, & Schmidt, 2014). Second, to elucidate potential differences between leadership approaches in explaining health at work (Gregersen et al., 2014; Franke et al., 2014; Zwingmann, Wegge, Wolf, Rudolf, Schmidt, & Richter, 2014). Third, to present new instruments and measures to assess and understand health-promoting leadership at work (Franke et al., 2014; Stocker, Jabobshagen, Krings, Pfister, & Semmer, 2014). Fourth, to explore the antecedents and moderators of health-promoting leadership across different levels of an organization and across different cultures (Steffens, Haslam, Kerschreiter, Schuh, & van Dick, 2014; Zwingmann et al., 2014). Fifth, to clarify the role of empowerment and task demands of employees in this process (Walsh et al., 2014; Franke et al., 2014) and also explore the health of leaders as an antecedent of health-promoting leadership and potential spillover processes (Franke et al., 2014).

The completion of the formal editorial process resulted in eight papers being included in this special issue<sup>1</sup>. Rather than summarize the content of these, in what follows we attempt to discuss and integrate main findings in three steps. First, we discuss in general what is known about the leadership-health-relationship in regard to four key types of leader behaviour (following DeRue, Nahrgang, Wellman, & Humphrey, 2011) and examine how each explains the capacity for leadership to be both a cure and a curse. Second, we outline a *five-pathway model* of the relationship between leadership behavior and the (ill-)health of employees which is based on these theories as well as new insights gleaned from the papers included in the special issue. Finally, we identify a range of gaps and opportunities in the literature that need to be addressed in order for research and practice on this topic to progress.

### **Leadership and health in relation to four forms of leader behaviour**

Leadership has a substantial influence on every aspect of employees' experience at work, including not only their effectiveness, motivation, satisfaction, but also their health and wellbeing (e.g., Ellemers, de Gilder & Haslam, 2004; Skakon et al., 2010). Speaking to this fact, leader behavior has been found to be associated with indicators of health such as sick leave and early retirement (Kuoppala et al., 2008), and to make a contribution to employee well-being over and above the effects of age, lifestyle, social-support in the workplace and at home, and stressful work and life events (Gilberth & Benson, 2004; van Dierendonck, Haynes, Borrill, & Stride, 2004). Nevertheless, an initial hurdle that one faces when reviewing research on the impact of leadership on employees' wellbeing, is the need to clarify one's definition of *leadership*. In what follows, we understand leadership to be the process of influencing group members in a way that motivates people to contribute to the achievement of group or organizational goals (e.g., Haslam, 2004; Rost, 2008). Nevertheless, we also recognize that much of what leaders *actually do* in the workplace does not accord with this definition (e.g., because their impact is demotivating and toxic; Lipman-Blumen, 2005). Accordingly, as suggested by the results of DeRue et al.'s (2011) meta-analysis, we instead focus our treatment on four broad categories of *leader behavior*: task-oriented, relationship-oriented, change-oriented, and passive/destructive leadership. In what follows, we briefly review research on the determinants of followers' health in the regard to these four forms of leader behavior.

#### ***Task-oriented leader behavior***

Task-oriented leadership comprises behaviors such as defining task roles and relationships among group members, coordinating group members' actions, and determining standards of task performance and the rewards for meeting those standards. This form of behavior thus includes elements of leadership theories that focus on processes of initiating structure (Stogdill, 1963), transaction (Bass, 1985), or goal setting (Locke & Latham, 2006).

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<sup>1</sup> The review of two papers in which the editors are co-authors was organized by Prof. Jürgen Weibler, the managing editor of *ZfP*. We thank him and the anonymous reviewers for their helpful comments.

In essence, this set of leader behaviors are a source of *group direction* (Haslam, Reicher & Platow, 2014) and thereby serve to reduce the ambiguity of individuals and groups as they engage with tasks, roles, and work processes. Accordingly, greater clarity with regard to such aspects at work is likely to be linked to greater satisfaction (Humphrey, Nahrgang, & Morgeson, 2007) and reduced strain. Illustrative support for this hypothesis comes from a study of 432 primary healthcare professionals in 43 teams in which Peiró, González-Romá, Ripoll, and Gracia (2001) found that leaders' initiation of structure had a positive influence on job satisfaction and an indirect effect on job strain that was mediated by the reduction of perceived role ambiguity. Further, the researchers found that leader behavior that enhanced role clarity decreased work strain and consequently enhanced employee wellbeing.

### ***Relationship-oriented leader behavior***

Relationship-oriented leader behaviors include consideration, concern, and respect for individual group members, openness to input from others, being approachable, and treating group members as equals. Such behaviors are central to leadership theories that focus on processes of empowerment, participation, leader-member-exchange (LMX), and social justice.

In essence, this set of leader behaviors are a source of *group engagement* (Haslam, Reicher, & Platow, 2014) and previous research has shown that they can impact employees' health in distinct ways. First, the extent to which leaders offer consideration, empathy, and concern has been found to contribute *directly* to followers' level of stress and this, in turn, contributes to the negative experiences that compromise employee health. For example, Tepper (2000) found that employees who perceived their supervisors to lack empathy and concern reported greater psychological distress. In another study, Harris and Kacmar (2006) found that supervisor- subordinate LMX has curvilinear relationship with subordinates' level of stress. Specifically, employees who reported having a high-quality LMX relationship experienced more stress than co-workers with moderate-quality LMX due to the extra pressure that arose from a sense of obligation and the desire to fulfill their superiors' expectations, while those with low-quality LMX relationships experienced more stress due to the lack of psychological connection with their leaders.

Second, other researcher has found evidence for *indirect* influence of relationship-oriented leader behaviors on followers' health. For example, Tordera, González-Roma, and Peiró (2008) found that employees who reported high-quality LMX relationships tend to show lower levels of role overload, which in turn contributed to their wellbeing. Relatedly, Kelloway, Weigand, McKee, and Das (2013) observed that leaders' displays of concern and consideration for the welfare of others serves to increase psychological capital in the form of hope, optimism, resilience and self-esteem, which in turn contributes to mental and physical wellbeing. Relationship-oriented leader behavior also involves giving team members more decision-making autonomy and increases their capacity to shape and influence organizational outcomes. Yet while this heightened control can increase satisfaction, motivation, and commitment in ways that also increase wellbeing and health, it may also lead to negative outcomes if it is associated with role conflict (Teh, Yong, Yong, Arumugam, & Ooi, 2009). Along these

lines, Benoliel and Somech (2014) found that the effects of participative leadership on health vary and are dependent, amongst other things, on individual differences between followers.

Finally, relationship-oriented leader behavior can also be seen as *moderating* the impact of work-related factors on employees' health and wellbeing, in so far as a leader can provide material, informative, and emotional support that promotes coping with stress. For example, Väänänen, Toppinen-Tanner, Kalimo, Mutanen, Vahtera, and Peiró (2003) found that support from a supervisor moderated the effects of job autonomy and physical symptoms on the amount of sick leave taken by employees.

### ***Change-oriented leader behavior***

This category of behaviors includes those that are oriented towards the process of facilitating and driving change in organizations. Such behaviors encompass actions such as developing and communicating a vision for change, encouraging innovative thinking and risk taking. In essence, this set of leader behaviors are a source of *group change* and they are central to leadership theories that focus on processes of transformation (e.g., Bass & Riggio, 2006; Burns, 1978).

The influence of change-oriented leader behavior can be seen as arising from attempts to motivate others to achieve more than they thought possible by making their work more meaningful and imbuing it with a greater sense of purpose (Bass & Riggio, 2006). In this sense, the impact of change-oriented leader behaviors on followers' health and wellbeing is primarily *indirect* in serving to shape the way in which subordinates experience and perceive their work environment (Arnold, Turner, Barlin, Kellowat, & McKee, 2007). Amongst other things, this allows employees to construe stressful events more positively (Britt, Adler, & Bartone, 2001) and increases their satisfaction by focusing attention on the pleasure rather than the pain of goal achievement (Westaby, Versenyi, & Hausmann, 2005) – encouraging followers to experience demands as challenges and opportunities (eustressors) rather than as threats (distressors; Haslam, 2001). At the same time, to the extent that employees object to or recoil from a particular leader's model of change, then leadership of this form will tend to have negative consequences for their well-being – especially if they are unable to mount effective resistance to it (Jetten, O'Brien, & Trindall, 2002).

### ***Passive and destructive leader behaviour***

Several leader behavior taxonomies include reference to leader passive or toxic leadership. This can encompass a broad spectrum of behaviors that cover everything from lack of engagement to behavior which is profoundly harmful (e.g., because the leader is a sociopath or narcissist; Rosenthal & Pittinsky, 2006). In essence, this set of leader behaviors are a source of *group degeneration* and they are discussed in models that focus on laissez-faire and toxic leadership (e.g., Cartwright & Zander, 1960; Lipmen-Blumen, 2005). Extending the arguments of DeRue et al. (2011), in this category we also consider destructive leadership behavior – for example, as witnessed in the form of abusive or toxic supervision (see Schyns & Schilling, 2013). This constitutes a more harmful, “darker side” of leadership in which behavior is intentionally obstructive or destructive, or at least is construed as such by followers (Conger, 1998).

Unsurprisingly, there is evidence that these various forms of leader behavior have a negative impact on employee wellbeing. Indeed, as a corollary of the fact that leader initiation of structure and consideration is typically found to reduce workplace stressors such as role conflict and role ambiguity, and thus to improve wellbeing, so abdication from such responsibilities tends to be positively related to the experience of such stressors. This is because the absence of such constructive behaviors contributes to the nonfulfillment of followers' expectations and needs, and hence is psychologically aversive. When a superior is insensitive to the legitimate expectations of subordinates (e.g., regarding presence, involvement, feedback and rewards), this may therefore reduce the quality of those subordinates' work-related experiences and hence threaten their wellbeing. In this vein, Skogstad, Enarsen, Rorsheim, Aasland, and Hetland (2007) found that exposure to passive leadership on the part of an immediate superior was closely linked to elevated levels of role conflict as well as role ambiguity. Passive leadership may also create ambiguity concerning goals, responsibilities, influences and work tasks. Accordingly, whereas communication frequency has been shown to be a negative predictor of work-related role ambiguity (Johlke & Duhan, 2001), the lack of communication – associated with an absent or passive leader – tends to be a positive predictor. Moreover, passive leadership also has negative consequences for employee well-being because it tends to go hand in hand with a social climate that is characterized by high levels of conflict (Skogstad et al., 2007).

What is true of passive leadership tends to be even more true of destructive leadership – a point confirmed in a recent meta-analysis reported by Schyns and Schilling (2013). These researchers found, for example, that destructive leadership was clearly correlated with both stress ( $r = .24$  across 24 studies) and reduced well-being ( $r = -.34$  across 4 studies). Indeed, such patterns are predicted by most theories of stress in so far as these see aggressive or hostile acts on the part of a supervisor as a direct source of stress at work and one that reduces employees' capacity to cope (primarily because it reduces social support; Cooper, Dewe, & O'Driscoll, 2001).

In sum, it is apparent that the above four forms of leader behavior all have the capacity to impact upon followers' health in distinct yet interrelated ways. In the following, we present a model that integrates these insights and identifies five different pathways that can be explored in seeking to explore these relationships further.

### ***Five pathways between leadership and health***

Based on the foregoing analysis and inspired by the eight papers in this special issue, in what follows we outline an integrative, multi-level framework that summarizes what we know today about the most important determinants, processes (mediators) and moderators of leadership-health-relationships. This analysis suggests that there are five key pathways that link leadership behavior (including its passive/destructive forms) to employee health. As summarized in Table 1, these five pathways describe processes at three different levels: the environmental/work system level (e.g., encompassing features of the work system and work design), the individual/dyadic level (e.g., involving communication between a supervisor and an employee) and the team/organizational level (e.g., involving interactions and processes within the team/organization as a whole).

The *first pathway* relates to the ways in which the health of employees is affected by *direct actions of the supervisor*. This encompasses motivating and supportive behaviour but also destructive forms of leader behavior that have a direct impact on the immediate health of employees. The *second pathway* comprises actions that are targeted less at individual workers and more at the level of the team or organization as a whole. Here the impact of leadership on health is felt through its impact on contextual variables such as the availability of social or organizational resources within a specific work system that have the capacity to affect employees' ability to cope with stressors at work. The *third pathway* describes moderator/buffer effects that are specified within a number of stress models. Here, for example, leader behavior can act as a buffer against high levels of demand at work or as a factor that serves to mobilize existing resources. The *fourth pathway* is at the team/organizational level and focusses on shared perceptions and/or actions within teams. Here leadership affects employees' collective assessment of work-related psychosocial stress – for example, in helping to shape shared perceptions of a situation as challenging, threatening, or rewarding. Finally, the *fifth pathway* is conceptualized as a bi-directional feedback loop. This speaks to the fact that leaders can be sensitive (or not) to the health of employees and as a result can engage in specific behaviors (e.g., helping) to improve this. In addition, the health of employees can be a resource for leaders (and vice-versa) that helps them achieve their own goals and this in turn can have an impact on the health and well-being of all parties.

**Table 1: Five pathways between leadership behavior and employee health**

<i>Pathway</i>	<i>Nature of health-promoting behavior</i>	<i>Level*</i>	<i>Papers in special issue that explore pathway</i>
<b>1. Person-focused action</b>	Promoting or hampering individual employees' health directly	I	Zwingmann; Walsh; Rivkin; Stocker; Winkler; Gregersen
<b>2. System-focused action</b>	Initiating actions and policies that benefit or harm workers as a whole (e.g., via work design)	E	Zwingmann; Rivkin; Franke
<b>3. Moderating action</b> to mitigate the impact of contextual factors	Buffering workers from the impact of environmental stressors or gardening their resources	I, E	
<b>4. Climate control and identity management</b>	Cultivating health related shared perceptions and actions within teams; crafting shared identity	T	Zwingmann; Franke; Steffens
<b>5. Modelling</b>	Exemplifying particular health behavior; being affected by the health behavior of followers	I, T	Franke

Note: Level: I – Interpersonal or dyadic; T = Team or organizational; E = Environmental or work-system

To understand the health-related impact of leader behaviors, it is useful to reflect more closely upon the nature of all five pathways and upon the ways in which they

can be constructively managed. Accordingly, in what follows, we work through the model in more detail. Moreover, in the process, we summarize insights from the eight papers included in this special issue and also discuss the most important mediators and moderators of leader-related health promotion in the workplace.

### ***Pathway 1: Leaders as initiators of direct person-focused action***

A fairly basic initial observation is that direct action in the context of dyadic interactions between supervisors and employees can have a major bearing on the latter's health. For example, if an employee is stressed their supervisor can offer them material, cognitive or emotional support, and if their workload is too high the supervisor can reduce this. At the same time, the supervisor may also *not* engage in these actions or can engage in the opposite forms of behavior (e.g., withdrawing support, increasing workload) or else initiate other destructive actions (e.g., involving hostility, aggression or humiliation) all of which generally serve to compromise employees' health.

Actions of this form are typically assessed by employee reports and have been examined in relation to all four forms of leader behavior considered in the previous section. In general research that has explored this observes that leader behaviors can have a direct psychological impact on employees (e.g., affecting their emotions, mood, morale and optimism) in ways that impact directly on well-being. Several of the papers in this special issue address this route. Zwingmann et al. (2014) examine potential health promoting and hampering effects of transformational, contingent reward and laissez-faire leadership across 16 countries with a multi-source dataset comprising 93,576 subordinates in 11,177 teams of a large international company. The results of multi-level analysis provide strong evidence of the health-promoting effects of transformational leadership and contingent reward as well as of the health-hampering impact of laissez-faire leadership across nations. Moreover, their study makes it clear that these leader behaviors affect both psychological and physical health. Related to this, Walsh et al. (2014) also report positive effects of transformational leadership and note that these are mediated by employees' sense of procedural justice and empowerment.

In their paper Rivkin and colleagues (2014) provide evidence of the positive relationship between servant leadership and employees' psychological health. Their diary study shows, amongst other things, that person-level servant leadership (controlling for day-level emotional dissonance) has a positive impact on day-level ego depletion and need for recovery. In a similar vein, both Stocker et al. (2014) and Winkler et al. (2014) show that when leaders provide social support, task-related communication, and appreciative feedback (in the form of simple praise and gratitude) this has a positive impact on employees' well-being – even for workers in low-skilled jobs working on poorly designed tasks. Gregersen et al. (2014) go further to investigate the question of which specific forms of leader behavior are most effective in promoting well-being and preventing burnout. Having examined the impact of five different types of leader behaviors they observe that LMX behavior has a more positive impact than that which is transformational or transactional, or which involves consideration and initiation of structure.

One problem with such analysis is that it often remains unclear precisely *why* a given follower experiences their relationship with their leader as transformational,



high-LMX etc. In particular, it is appropriate to ask whether this results from specific behavior that a leader has undertaken (e.g., offering support) or whether it reflects more abstract processes (e.g., of social identification, or personality compatibility; Steffens et al., 2014; see also Haslam et al., 2011). This question in turn suggests that there is scope for developing more specific instruments to assess the concrete supervisor behavior that is relevant for the health of employees (see Franke et al., 2014; Stocker et al., 2014) together with other social psychological and individual difference correlates. The latter would be useful to explore because (depending on one's metatheoretical orientation) it would seem plausible that factors such as personality or shared social identity can partly determine whether specific supervisor behaviours (passive, constructive or destructive) serve to help or harm the health of employees (see Benolil & Somech, 2014). Indeed, speaking to such possibilities, Winkler et al. (2014) report intriguing interactions between the power distance of supervisors and employees which suggest that issues of leader-subordinate fit have a bearing on health outcomes.

### ***Pathway 2: Leaders as designers of work systems***

The nature and design of work in an organization or department is a key determinant of employee health and clearly supervisors often play a central role in decisions that pertain to this (e.g., determining the tools a person has to work with, their work demands, their degree of autonomy, the people they work with). Yet even though others have pointed to the importance of this pathway for employee health (e.g., Fritzsche, Wegge, Schmauder, Kliegel, & Schmidt, 2014; Humphrey et al., 2007; Liebermann, Wegge, Jungmann, & Schmidt, 2013) it is one that is often overlooked in both theoretical and practical treatments of this topic. In particular, as Gray (2009) observes, policies to improve health in the workplace are inclined to encourage workers see this as their responsibility and rarely focus energy on the challenge of requiring leaders to consider (and change) the way in which the conditions they create contribute to a healthy or unhealthy workforce.

Nevertheless, this special issue presents a range of important findings that evidence the importance of this pathway. In particular, Zwingmann et al. (2014) observe that team size has an impact on employee health (smaller teams are better), Rivkin et al. (2014) report a clear correlation ( $r = .37$ ) between job ambiguity and emotional dissonance at work, and Franke et al. observe that when employees have engaging working tasks to perform this is positively correlated with health-promoting behaviors, attitudes and values. 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.

### ***Pathway 3: Leaders as 'buffers' against stressors or 'gardeners' of resources***

There are a range of models in the stress literature which point to the way in which the actions of individuals can moderate the impact of environmental factors of employee health. In particular, Lazarus and Folkman's (1984; Lazarus, 1966) influential transactional model points to the capacity for individuals' experience of stress to be structured by the way in which others encourage them to construe particular stressors

(e.g., difficult tasks, multiple demands) as either self-compromising threats or self-enhancing challenges (Haslam, Jetten, O'Brien, & Jacobs, 2004; van Steenbergen, Ellemers, Haslam, & Uhlings, 2008).

In this regard it is clear that leader behavior (and presence) can have an especially significant role to play in serving either as a buffer against contextual factors that might otherwise be a source of strain (e.g., high work demands) or as an amplifier of pre-existing organizational or personal resources (e.g., various forms of support) that can be drawn upon in ways that protect and promote health (e.g., see Turner & Gray, 2009). Reflecting the state of the field as a whole, this is not a pathway that papers in this special issue examine directly. Accordingly, we would identify this as an important line of enquiry for future work to pursue – particularly with a view to better understanding when, why and how leaders are able to successfully shield employees from the slings and arrows of organizational life (e.g., helping them to cope with aggressive customer behavior; Wegge, Schuh, & van Dick, 2012) as well as to make the most of its positive affordances.

#### ***Pathway 4: Leaders as creators of group climate and shared social identity***

This pathway pertains to phenomena at the team and organizational level and focusses on the role that leaders play in cultivating and embedding shared perceptions and actions within teams. Reflecting researchers' general tendency to construe leadership in individualistic terms, this is a pathway that is rarely considered in reflecting on the four forms of leader behavior described above.

The key idea here is that leaders do not only influence employees by structuring their dyadic interactions (e.g., in ways suggested by LMX theory) but also by crafting a sense of shared social identity that in turn structures both collective assessments of work-related psychosocial stress (i.e., primary appraisal) and joint coping processes (secondary appraisal; see Haslam & Reicher, 2006). Nevertheless, three papers in this special issue point to the importance of this pathway. First, Zwingmann et al. note that members of teams in which there is a shared perception of high transformational leadership report better health. Second, Franke et al. (2014) show that by creating a positive organizational climate leaders are likely to encourage health-promoting behaviors on the part of both employees and supervisors. Finally, the paper by Steffens et al. provides a robust theoretical analysis that helps explain why such relationships can be expected. Specifically, in line with social identity theorizing, these researchers argue that by acting as entrepreneurs of identity who help followers develop a special sense of "us" (Reicher, Haslam, & Hopkins, 2005), leaders can also promote followers' work engagement and reduce their burnout. Importantly too, such leadership also proves to be good for team performance.

#### ***Pathway 5: Leaders as models of followers' health behavior and health***

Our discussion of the above pathways might lead one to imagine that the pathways from leader behavior to employee health are all deliberative and one-way – as if leaders can only enhance or else compromise the health of those they lead by being conscious of their own impact and taking purposive steps to harness this to positive effect. Yet is this the whole story? There are at least three reasons why we think it is not.

The first is that, independently of what they strive to do, the health behavior and status of a leader can serve as a model that shapes the health of employees – at least to the extent that they see the leader as a guide (prototype) for their own health behavior. Second, as we have noted, leaders often observe and respond to employee health, and it is likely that their perceptions and actions also have health-related implications for themselves. In the military, for example, it is clear that many (but not all) officers are traumatized by the traumas that those under their command have to endure and that this can also encourage acts of self-sacrifice that are personally compromising. Relatedly, third, the health of employees can also be seen as a resource for leaders that enhances their own psychological health (e.g., by promoting a sense of self-efficacy and optimism).

Such possibilities speak to the way in which leaders both model and are modeled by the health of others. Again, though, such feedback loops have not been a significant focus of research attention to date. In this regard, however, the paper by Franke et al. (2014) presents the prospect of significant advance in presenting new scales to measure both (a) employees' perceptions of health-related leader behavior as well as (b) health-related employee behavior. Scales for (c) assessing the supervisor perception of his/her own health related behavior will be available soon. Using such instruments to examine the reciprocal relationships between leader and follower health promises to be another important avenue for future research to explore. In a similar vein, future research should also investigate how team members observe and influence the health behavior of their own team mates. Diestel, Wegge, and Schmidt (2014) found, for example, that mean- and dispersion levels of work-unit absenteeism are influential social-contextual cues that have an impact on the satisfaction-individual absenteeism relationship.

### **Discussion: Towards a more expansive appreciation of the relationship between leadership and health**

If the foregoing review serves to underline one key point about research into the relationship between leadership and health it is that research in this area is very much in its infancy. Accordingly, the field can be seen to be underdeveloped at theoretical, empirical and practical levels. In bringing this introductory paper to a close, it is therefore worth reflecting more closely on the nature of this underdevelopment, with a view to understanding what has been achieved in research to date while also providing clear direction for future research.

#### ***The need for more expansive theory***

Unsurprisingly perhaps, as researchers have set about trying to understand the links between leadership and health, their investigations have been heavily structured by prevailing theory. Moreover, because this emerging field has been colonized more enthusiastically by leadership researchers than by health researchers, it is apparent that the main theories that have been used to explore this terrain have come more from the domain of leadership than from the domain of health. In particular, the theoretical landscape is currently dominated by two such theories: transactional leadership theory (TLT) and LMX theory.

As papers in this special issue by Zwingmann et al. (2014) and Gregerson et al. (2014) demonstrate, each of these theories has something important to offer. On the one hand TLT points to the way in which, by helping workers to construe their work as having higher-level value leaders can not only motivate workers but also give them a sense of health-enhancing meaning and purpose. On the other hand, in more transactional terms, LMX points to the fact that much of leaders' effectiveness rests on their capacity to offer something to individual workers (e.g., providing them with health-enhancing material and emotional support) in return for their endorsement and engagement. It also follows that leaders who do neither of these things run the risk of creating a workforce that not only underperforms but is also unhealthy.

Yet as has been noted elsewhere, each of these theories also has significant shortcomings and blind spots (e.g., see Haslam et al., 2011; van Knippenberg & Sitkin, 2013). Thus while descriptively rich, the explanatory scaffolding of TLT is weak in the sense that it does little to explain what exactly it is that underpins perceptions of a leader's transformational power. At the same time, although LMX shows how dyadic processes of exchange can bolster leadership and hence health, it is apparent that there is a world of extra-dyadic organizational behavior that this theoretical framework struggles to account for (Hogg & Martin, 2003).

At the very least then, alternative theories are required that address these lacunae. As Steffens et al. note in their contribution to this special issue (see also Rivkin et al., 2014; Franke et al., 2014; Stocker et al., 2014), one theoretical approach with the potential to breach this gap is derived from social identity research. In the first instance, this suggests that leaders' transformational power derives from their capacity to create, advance, represent and embed a shared sense of social identity that binds followers and leaders together, and thereby provides a basis for them both to collaborate to achieve shared goals and to feel good about doing so (e.g., Ellemers et al., 2004; Haslam et al., 2011; Reicher et al., 2005; Steffens et al., in press, a, b). It also suggests that perceptions of successful exchange at supra-dyadic levels vary as a function of the degree to which leaders and followers believe that they share this sense of psychological group membership (as a part of a unified "us"; Turner, Oakes, Haslam & Reicher, 1994).

One further important reason for favouring this approach is that as well as providing the basis for a new psychology of leadership, social identity theorizing also provides the framework for a new psychology of health (Haslam, Jetten, Postmes, & Haslam, 2009; Jetten, Haslam, & Haslam, 2012). In particular, this is because there is now a large body of research which shows, *inter alia*, that social identity is a basis for (a) symptom appraisal (Levine & Reicher, 1990), (b) social support (Haslam, Jetten, O'Brien, Vormedal & Penna, 2005), (c) effective coping (Branscombe, Schmitt, & Harvey, 1999), and psychological and physical resilience (Cruwys, Haslam, Dingle, Jetten, Hornsey, Chonga, & Oeia, 2014; Haslam, Haslam, Knight, Gleibs, Ysseldyk, & McCloskey, 2014). As noted above, papers in this special issue are the first to explore the role of social identity as a lynchpin between leadership and health, but our sense is that they have merely exposed the tip of what is a large theoretical iceberg.

### *The need for more expansive empirical research*

In our attempt to specify the various pathways through which leadership is related to health, it is apparent that while some of the pathways we outlined were already well explored, others were far less well travelled. In particular, while there is a large amount of research that speaks to the direct dyadic links specified in Pathway 1, few other pathways have been extensively explored, and some have received almost no research attention. In large part this follows from the previous point, since the dominance of LMX and TLT approaches has attuned researchers more to the direct role of a leader in providing support for subordinates and giving them a sense of purpose than to more nuanced and indirect links of the form our review has exposed.

Political and metatheoretical biases which lead researchers to construe both leadership and health in individualized terms have not helped much in this regard either. The same is true for the perennial conflation of leader behavior (what leaders do) with leadership (the process of influencing followers). Above, we have been careful to disaggregate these two things – not least, because certain forms of leader behavior (especially those that are toxic) are likely to have very different consequences for health than true leadership.

Moreover, in tending to conceptualize leadership and health as *properties* of individuals (such that a person is understood simply to be a good or bad leader, and to be healthy or unhealthy) rather than as *processes* grounded in context-dependent forms of social relationships, research has often been blind to the ways in which both leadership and health can change as a function of social and organizational exigencies (for an empirical demonstration of this point, consider the ways in which changes to group dynamics had a profound impact on both leadership and health in the BBC Prison Study; Haslam & Reicher, 2006; Reicher et al., 2005). Empirically, this also means that researchers often construe their task as being to capture *the* relationship between particular variables (e.g., leader style and follower stress), rather than to imagine and explore the ways in which this relationship might vary as a function of broader contextual factors (such as the degree to which a given style is consonant with identity-related expectations).

Going forward, there is thus considerable scope for research to extend well beyond the relatively confined territory that it currently maps out and with which it is currently comfortable. As well as exploring the forgotten pathways identified in our review above, this research should also start to ask some more difficult questions of both leadership and health researchers – and in particular, place a premium on testing parsimonious, coherent and comprehensive theoretical accounts that explain key phenomena in both domains. In this regard, the fact that researchers could ever imagine that leadership and health were unrelated topics bears testimony to an unproductive compartmentalization that places arbitrary barriers between the concerns of one sub-discipline of psychology and those of another. Both theoretically and empirically, it is time to repair this faultline, and see it for the impediment to understanding that it is. In doing so, it should also be examined in more detail why leaders are typically more healthy than employees (Sherman, Lee, Cuddy, Renshon, Oveis, Gross, & Lerner,

2012) and why organizational changes are strongly associated with health risks for employees (Nebel-Töpfer, Wolf, & Richter, 2012; Rigotti & Otto, 2012).

### ***The need for more expansive policy and practice***

Important as it is, the motivation to map and understand the pathways between leadership and health should not mark the limits of our intellectual ambitions. Indeed, extending upon the previous point, one reason why these links have not been explored more extensively before is that it has not always suited policy makers to see leadership as something that has (sometimes negative) consequences for health, or health as something that results from (sometimes deficient) leadership. Indeed, as we have seen, those who endorse individualistic models of leadership and medical models of health, sometimes explicitly eschew these models because they are at odds with a neo-liberal world view in which leadership is seen as the responsibility of great men and health is seen as the responsibility of individual citizens.

In helping to expose the limitations of such thinking, future research should also start to ask more difficult political questions for both organizational and social policy. As Gray and colleagues (e.g., 2003) suggest, this process can start by asking whose interests are served by first failing to recognize these links, and by then advancing organizational and social policy in which leadership and health are completely estranged. We can then go on to ask more difficult questions about whose interests organizational and health psychologists serve when they do the same. In this regard, one of the most important reasons for pursuing research into leadership and health is that it must surely make a strong case for progressive policies which recognize the social determinants of both health and leadership – and which, having made this connection, are on stronger footing when it comes to devising policies and practices that seek to improve outcomes in both domains.

### ***Conclusion***

Our goals in this chapter have been relatively modest. Rather than rush to integrate the fields of leadership and health within an overarching model, we have instead chosen the more cautious path of trying to map the landscape which is defined by the intersection of these fields and by the various papers that are contained in this special issue. Nevertheless, we would argue that this exercise has proved fruitful not simply because it tells us what has been achieved, but also because it shows us how much more there is to do. In particular, by trying to carefully stake out this ground, our sense is that the review has identified some incredibly important theoretical, empirical and political terrain that this work has yet to cover.

Figuratively speaking, the papers that follow thus represent the first tentative steps in a journey of a thousand miles. Yet having made them we should be more confident both in where we are going, and why we are trying to get there. We should also be excited. This is not only because we have embarked on a journey of immense importance, but also because the papers collected here provide ideas, tools and leadership to sustain us as we advance.

## References

- Arnold, K. A., Turner, N., Barlin, 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*, 193-203.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B.M., & Riggio, R.E. (2006). *Transformational leadership* (2nd ed.) Mahwah, NJ: Erlbaum.
- Benliel, P., & Somech, A. (2014). The health and performance effects of participative leadership: Exploring the moderating role of the Big Five personality dimensions. *European Journal of Work and Organizational Psychology, 23*, 277-294.
- Branscombe, N. R., Schmitt M. T., Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology, 77*, 135-149.
- Britt, T. W., Adler, A. B., & Bartone, P. T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology, 6*, 53-63.
- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Cartwright, D. & Zander, A. (1960). Leadership and group performance: Introduction. In D. Cartwright & A. Zander (Eds.), *Group dynamics: Research and Theory* (2<sup>nd</sup> ed., pp. 487-510). New York: Harper & Row.
- Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviours. *Journal of Occupational and Organizational Psychology, 86*, 22-49.
- Conger, J. (1998) The dark side of leadership. In G. R. Hickman (Ed.), *Leading organizations: Perspectives for a new era*. London: SAGE
- Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational stress: A review and critique of theory, research and applications*. London: Sage.
- Cruwys, T., Haslam, S. A., Dingle, G. A., Jetten, J., Hornsey, M. J., Chonga, E. M. D., & Oeia, T. P. S. (2014). Feeling connected again: Interventions that increase social identification reduce depression symptoms in community and clinical settings. *Journal of Affective Disorders, 159*, 139-146.
- DeRue, D. S., Nahrgang, J. D., Wellman, N. & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: A meta-analytic test of their relative validity. *Personnel Psychology, 64*, 7-52.
- Diestel, S., Wegge, J., & Schmidt, K.-H. (2014). The impact of social context on the relationship between individual job satisfaction and absenteeism: The roles of different foci of job satisfaction and work-unit absenteeism. *Academy of Management Journal, 57*, 353-382.
- Ellemers, N., De Gilder, D., & Haslam, S. A. (2004). Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management Review, 29*, 459-478.
- 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 f. Personalforschung – Journal of Research in Human Resource Management, 28*, 139-161.
- Fritzsche, L. Wegge, J., Schmauder, M., Kliegel, M., & Schmidt, K. H. (2014). Good ergonomics and team diversity reduce absenteeism and errors in car manufacturing. *Ergonomics, 57*, 148-161.
- Gilbreth, B., & Benson, P. G. (2004). The contribution of supervisor behavior to employee psychological well-being. *Work and Stress, 18*, 255-266.
- Gray, G. C. (2009). The responsabilization strategy of health and safety neo-liberalism and the reconfiguration of individual responsibility for risk. *British Journal of Criminology, 49*, 326-342.
- Gregersen, S., Vincent-Höper, S., & Nienhaus, A. (2014). Health-relevant leadership behaviour: A comparison of leadership constructs. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management, 28*, 117-138.
- Harris, K. J., & Kacmar, K. M. (2006): Too much of a good thing: the curvilinear effect of leader-member exchange on stress. *The Journal of Social Psychology, 146*, 65-84.

- Haslam, C., Haslam, S. A., Knight, C., Gleibs, I., Ysseldyk, R., & McCloskey, L.-G. (2014). We can work it out: Group decision-making builds social identity and enhances the cognitive performance of care home residents. *British Journal of Psychology*, *105*, 17-34.
- Haslam, S. A. (2001). *Psychology in organizations: The social identity approach*. London: Sage.
- Haslam, S. A. (2004). Leadership. In A. Kuper & J. Kuper (Eds.), *The social science encyclopedia* (3rd ed., pp. 566-568). New York: Routledge.
- Haslam, S. A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well-being: An emerging agenda for applied psychology. *Applied Psychology: An International Review*, *58*, 1-23.
- Haslam, S. A., Jetten, J., O'Brien, A., & Jacobs, E. (2004). Social identity, social influence, and reactions to potentially stressful tasks: Support for the self-categorization model of stress. *Stress and Health*, *20*, 3-9.
- Haslam, S. A., & Reicher, S. D. (2006). Stressing the group: Social identity and the unfolding dynamics of responses to stress. *Journal of Applied Psychology*, *91*, 1037-1052.
- Haslam, S. A., Reicher, S. D. & Platow, M. J. (2011). *The new psychology of leadership: Identity, influence and power*. London: Psychology Press.
- Haslam, S. A., Reicher, S. D., & Platow, M. J. (2014). Leadership: Theory and practice. In J. Simpson & J. Dovidio (Eds.), *Handbook of personality and social psychology*. New York: American Psychological Association.
- Hogg, M. A., & Martin, R. (2003). Social identity analysis of leader-member relations: Reconciling self-categorization and leader-member exchange theories of leadership. In S. A. Haslam, D. Van Knippenberg, M. J. Platow, & N. Ellemers (Eds.), *Social identity at work: Developing theory for organizational practice* (pp. 139-154). New York: Psychology Press.
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, *92*, 1332-1356.
- Jetten, J., Haslam, C., & Haslam, S. A. (Eds.) (2012). *The social cure: Identity, health and well-being*. Hove, UK: Psychology Press.
- Jetten, J., O'Brien, A., & Trindall, N. (2002). Changing identity: Predicting adjustment to organizational restructure as a function of subgroup and superordinate identification. *British Journal of Social Psychology*, *41*, 281-297.
- Johlke, M. C., & Duham, D. F. (2001). Supervisory communication practices and boundary spanner role ambiguity. *Journal of Managerial Issues*, *13*, 87-111.
- Kelloway, K., Weigand, H., McKee, M., & Das, H. (2013). Positive leadership. *International Journal of Leadership and Organizational Studies*, *20*, 107-117
- 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 & Environmental Medicine*, *50*, 904-915.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York: McGraw-Hill.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer Publishing Company.
- Levine, R. M., & Reicher, S. D., (1996). Making sense of symptoms: Self-categorization and the meaning of illness and injury. *British Journal of Social Psychology*, *35*, 245-256.
- Liebermann, S., Wegge, J., Jungmann, F., & Schmidt, K.-H. (2013). Age diversity and individual team member health: The moderating role of age and age stereotypes. *Journal of Occupational and Organizational Psychology*, *86*, 184-202.
- Lipman-Blumen, J. (2005). *The allure of toxic leaders: Why we follow destructive bosses and corrupt politicians – and how to survive them*. Oxford: Oxford University Press.
- Locke, E. A., & Latham, G. P. (2006). New directions in goal setting theory. *Current Directions in Psychological Science*, *15*, 265-268.
- Nebel-Töpfer, C., Wolf, S., & Richter, P. (2012). Change-Prozesse im Unternehmen – eine Herausforderung für die Prävention [Change processes in organization - a challenge for the Prevention]. *Zeitschrift für Arbeitswissenschaft*, *66*, 277-290.



- Peiró, J.M.; González-Romá, V., Ripoll, P., & Gracia, F. (2001). Role stress and work team variables in Primary health care teams: A structural equations model. In J. de Jonge, P. Vlerick, A. Büsing & W.B. Schaufeli (Eds.), *Organizational Psychology and Health Care at the Start of a New Millennium* (pp.105-122). Munich, Hampf.
- Reicher, S. D., Haslam, S. A., & Hopkins, N. (2005). Social identity and the dynamics of leadership: Leaders and followers as collaborative agents in the transformation of social reality. *Leadership Quarterly*, 16, 547-568.
- Rigotti, T., & Otto, K. (2012). Organisationaler Wandel und die Gesundheit von Beschäftigten [Organizational change and health of employees]. *Zeitschrift für Arbeitswissenschaft*, 66, 253-267.
- Rivkin, W., Diestel, S., & Schmidt, K.-H. (2014). The positive relationship between servant leadership and employees' psychological health: A multi-method approach. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management*, 28, 52-72.
- Rosenthal, S. A., & Pittinsky, T. L. (2006). Narcissistic leadership. *The Leadership Quarterly*, 17, 617-633.
- Rost, J. C. (2008). Leadership definition. In A. Marturano & J. Gosling (Eds.), *Leadership: The key concepts* (pp.94-99). New York: Routledge.
- Rowold, J. & Borgmann, L. (2013). Are leadership constructs really independent? *Leadership and Organization Development Journal*, 34, 20-43.
- 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, 138-158.
- Sherman, G. D., Lee, J. J., Cuddy, A. J. C., Renshon, J., Oveis, C., Gross, J. J., & Lerner, J. S. (2012). Leadership is associated with lower levels of stress. *Proceedings of the National Academy of Sciences of the United States of America*, 109, 17903-17907.
- 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, 107-139.
- Skogstad, A., Einarsen, S., Torsheim, T., Aasland, M. S., Hetland, H. (2007). The destructiveness of laissez-faire leadership behavior. *Journal of Occupational Health Psychology*, 12, 80-92.
- Steffens, N. K., Haslam, S. A., Kerschreiter, R., Schuh, S., & van Dick, R. (2014). Leaders enhance group members' work engagement reduce their burnout by crafting social identity *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management*, 28, 173-194.
- Steffens, N., Haslam, S. A., & Reicher, S. D. (in press, a). Up close and personal: Evidence that shared social identity is a basis for the 'special' relationship that binds followers to leaders. *Leadership Quarterly*.
- Steffens, N., Haslam, S. A., Reicher, S. D., Platow, M. J., Franssen, K., Yang, J., Ryan, M. K., Jetten, J., Peters, K. O., & Boen, F. (in press, b). Leadership as social identity management: Introducing the Identity Leadership Inventory (ILI) to assess and validate a four-dimensional model. *Leadership Quarterly*.
- Stocker, D., Jacobshagen, N., Krings, R., Pfister, I. B., & Semmer, N. K. (2014). Appreciative leadership and employee well-being in everyday working life. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management*, 28, 73-95.
- Stogdill R. M. (1963). *Manual for the leader behavior description questionnaire: Form XII*. Columbus, OH: Ohio State University Bureau of Business Research, College of Commerce and Administration.
- Teh, P. L., Yong, C. C. Yong., Arumugam, V. and Ooi, K. B. (2009). Role conflict in information system personnel: A TQM perspective, *Journal of Applied Sciences*, 9, 2701-2713
- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43, 178-190.
- Tordera, N., González-Romá, V., & Peiró, J. M. (2008). The moderator effect of Psychological climate on the relationships between leader-member exchange (LMX) quality and role overload. *European Journal of Work and Organizational Psychology*, 17, 55-72.
- Turner, N., & Gray, G. C. (2009). Socially constructing safety. *Human Relations*, 62, 1259-1266.
- Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, 20, 454-463.

- van Dierendonck, D., Haynes, C., Borrill, C., & Stride, C. (2004). Leadership behavior and subordinate well-being. *Journal of Occupational Health Psychology, 9*, 165-175.
- van Knippenberg, D. & Sitkin, S.B. (2013). A critical assessment of charismatic-transformational leadership research: Back to the drawing board? *The Academy of Management Annals, 7*, 1-60.
- van Steenbergen, E. F., Ellemers, N., Haslam, S. A., & Uhlings, F. (2008). There is nothing either good or bad but thinking makes it so: Informational support and cognitive appraisal of the work-family interface. *Journal of Occupational and Organizational Psychology, 81*, 349-367.
- Wegge, J., Schuh, S. C., & van Dick, R. (2012). I feel bad – We feel good!? Emotion as a driver for personal and organizational identity and organizational identification as a resource for serving unfriendly customers. *Stress and Health, 28*, 123-136.
- Winkler, E., Busch, C., Clasen, J & Vowinkel, J. (2014). Leadership behavior as a health-promoting resource for workers in low-skilled jobs and the moderating role of power distance orientation. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management, 28*, 96-116.
- Väänänen, A. Toppinen-Tanner, S., Kalimo, R., Mutanen, P., Vahtera, J., & Peiró, J. M. (2003). Job characteristics, physical and psychological symptoms, and social support as antecedents of sickness absence among men and women in the private industry sector. *Social Science & Medicine, 57*, 807-824.
- Walsh, M., Dupré, K. & Arnold, K. A. (2014). Processes through which transformational leaders affect employee psychological health. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management, 28*, 162-172.
- Westaby, J. D., Versenyi, A., & Hausmann, R. C. (2005). Intentions to work during terminal illness: An exploratory study of antecedent conditions. *Journal of Applied Psychology, 90*, 1297-1305.
- Zwingmann, I., Wegge, J., Wolf, S., Rudolf, M., Schmidt, M., & Richter, P. (2014). Is transformational leadership healthy for employees? A multilevel analysis in 16 nations. *Zeitschrift f. Personalforschung – Journal of Research in Human Resource Management, 28*, 24-51.