

Leadership behavior and employee well-being:  
An integrated review and a future research agenda

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**Abstract**

Leadership behavior has a significant impact on employee behavior, performance and well-being. Extant theory and research on leadership behavior, however, has predominantly focused on employee performance, treating employee well-being (typically measured as job satisfaction) as a secondary outcome variable related to performance, rather than as an important outcome in and of itself. This qualitative state of the science review examines the process by which leadership behavior (i.e., change, relational, task, passive) affects employee well-being. We identify five mediator groupings (social-cognitive, motivational, affective, relational, identification), extend the criterion space for conceptualizing employee well-being (i.e., psychological: hedonic, eudaimonic, negative; and physical), examine the limited evidence for differential processes that underlie the leader behavior-employee well-being relationship and discuss theoretical and methodological problems inherent to the literature. We conclude by proposing a theoretical framework to guide a future research agenda on how, why and when leadership behavior impacts employee well-being.

### **Introduction**

Management research needs to strive for higher impact (George, 2016). Specific attention has been drawn to tackling Grand Challenges such as those formulated in the Sustainable Development Goals (SDGs) of the United Nations (UN), with SDG #3 focusing on “good health and well-being” (George, Howard-Grenville, Joshi, & Tihanyi, 2016), which is becoming increasingly important for policy-making, research and practice globally (e.g., Grant, Christianson, & Price, 2007). Leaders play a pivotal role in organizations and their behavior has a significant impact on the work behavior, performance and well-being of their employees (e.g., Avolio, Walumbwa, & Weber, 2009; Kuoppala, Lamminpää, Liira, & Vainio, 2008). The leadership literature, however, has largely neglected research on employee health and well-being in favor of employee performance (Grant et al., 2007), even though the relationship between well-being (conceptualized as job satisfaction) and performance is modest at best (e.g., Judge, Bono, Thoresen, & Patton, 2001). Moreover, when included in leadership research, employee well-being has either been treated as a secondary outcome or as a mediator that helps explain the leadership-performance relationship (Montano, Reeske, Franke, & Hüffmeier, 2017). That is, employee well-being has generally not been considered as an important outcome in and of itself.

Leadership researchers have typically equated well-being with job satisfaction (e.g., Kuoppala et al., 2008). From a criterion perspective, however, this narrow focus on job satisfaction does not fully capture the concept of employee well-being, which is multi-dimensional (e.g., Grant et al., 2007) and can be measured at broad (e.g., general health) as well as at narrow levels (e.g., specific affects: Warr, 2013). Moreover, other important well-being and health outcome variables linked to psychological and physical health (e.g., thriving, sleep quality) are ignored. While the association of leadership with employee job satisfaction is relatively well-established, we cannot infer that relationship between

leadership and other well-being outcomes are similar. The same leadership behavior can result in trade-offs between different dimensions of well-being, where actions that may improve, for example, psychological well-being can be detrimental to physical well-being (Grant et al., 2007).

The upshot of this discussion is that the majority of leadership researchers have failed to take employee well-being seriously enough. Thus, our understanding of the impact of a leader's behavior on employee well-being is underdeveloped and narrowly-focused. Studies that have examined the influence of leadership behavior on follower well-being, beyond that of job satisfaction, focus on narrow aspects of well-being and apply theories and approaches that were principally designed with improving employee performance, rather than well-being (e.g., see Skakon, Nielsen, Borg, & Guzman, 2010, for a review on leadership and employee affective well-being; Montano et al., 2017, for a review on leadership and employee mental health). Moreover, prior reviews have focused on specific leadership styles and outcomes without systematically examining the processes that underlie the relationship between leadership behavior and well-being (e.g., Arnold, 2017; Harms, Credé, Tynan, Leon, & Jeung, 2017; Montano et al., 2017; Skakon et al., 2010). To fill this lacuna, the overarching objective of our paper is to conduct a state of the science review of leadership research that examines the processes by which leadership behavior impacts employee well-being. Our qualitative review seeks to answer the following questions: What kinds of mediational processes have been examined that clarify the relationships between specific leadership behaviors and different forms of well-being? Can we identify differential relationships between specific leadership behaviors and specific forms of employee well-being? What is the state of science of theory and methodology applied in empirical studies that have investigated leadership behavior, mediational processes and employee well-being?

To address these questions, our review has three primary research goals: First, to get a better understanding of the mediational processes through which leadership behavior affects employee well-being. Second, to extend the criterion space for conceptualizing employee well-being in leadership research, which we argue is essential for identifying differential processes in the leadership behavior-employee well-being relationship. Third, to understand theoretical and methodological issues inherent in the literature to guide a future research agenda on how, why and when leadership behavior impacts employee well-being.

Our review contributes to the leadership and well-being literature in the following four ways. First, it identifies five theory-driven mediator groupings in the leadership-well-being relationship. One of the key findings from our review is that the most frequently measured mediators were social-cognitive (e.g., follower self-efficacy and empowerment) and relational (e.g. trust) in nature and little research has focused on affective pathways (e.g., follower and leader affect) and identification processes (e.g., follower identification with the leader). By delineating the mechanisms through which leadership unfolds, it not only helps develop explanatory theories of leadership but also has practical implications for how to improve employee well-being.

Second, our paper expands the well-being criterion space beyond job satisfaction and other positive forms of psychological well-being, in particular hedonic well-being. The narrow focus on job satisfaction in the leadership literature is lagging behind the growing interest in eudaimonic forms of well-being (such as thriving; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) in the wider organizational behavior and psychological literatures (Gallager, Lopez, & Preacher, 2009; Warr, 2013). Our review distinguishes between negative and positive forms of psychological well-being and within positive well-being between hedonic and eudaimonic types. In addition, we also review physical well-being. Such a distinction is not only important for examining differential relationships

between leadership behavior and employee well-being, but also for investigating potential trade-off effects between well-being criteria. Results of our review demonstrate, however, that few studies measured negative well-being<sup>1</sup> (e.g., burnout) and hardly any studies considered physical well-being.

Third, we review differential relationships between leadership behavior and employee well-being. Differential processes can take many forms: for example, an array of leadership behaviors may influence a particular kind of well-being through different mediational pathways, and the same leadership behavior may have differential effects on a variety of well-being via alternative mediational processes. We conclude that the literature to date has had a disproportionate focus on change-related forms of leadership (especially transformational leadership) and that this area of research is very much emergent. Our review points to some limited evidence of social-cognitive (self-efficacy) and relational (e.g., trust) mediator pathways between transformational leadership and hedonic forms of well-being (typically job satisfaction). However, the current state of the literature does not allow us to draw firm conclusions about the differential processes.

Finally, our review shows that theories and methods are underdeveloped. For example, the choice of mediational and well-being variables is often not strongly theory-driven, but appears to be based on leadership approaches. Our review also demonstrates that very few studies consider the relationship between leadership behavior and well-being to be a process – both theory and research design are usually based on the implicit assumption that this relationship and the constructs involved are static, as reflected in the predominantly cross-sectional research designs. Of concern is also the observation that research designs are overwhelmingly common-source (using follower-rated measures), which constitutes a serious methodological problem. To address these theoretical and methodological issues, we develop a future research agenda on leadership behavior and employee well-being by integrating two

well-established theories of well-being: the Conservation of Resources (COR) theory by Hobfoll (1989) and Diener's modified adaptation theory (Diener, Lucas, & Scollon, 2006). In doing so, we develop a pathway for a future research agenda that is grounded in a differentiated view of employee well-being and a process and resource-based perspective of the leadership behavior-well-being relationship. The integration of these established well-being theories for application in leadership research is not only of theoretical relevance, but also of methodological significance as it can help inform choice of constructs and research design. In short, we propose a theoretical framework to guide a future research agenda on how, why and when leadership behavior impacts employee well-being.

The review is structured around four main sections. First, we outline our theoretical approach to the review. Next, we describe the methodology that we applied to search and code papers. We then discuss the results of our review, organized by our three research goals. Finally, we discuss implications for research on leadership and employee well-being and based on those, develop a theoretical framework to guide a future research agenda.

### **Theoretical Approach to Review**

As the literature on leadership behavior and employee well-being, which also takes into account mediation processes, is still emergent, it was best suited to a selective, qualitative review. This enabled us to examine theoretical and methodological issues, which served as a starting point for our objective to advance a more comprehensive theoretically-guided future research agenda. Our review focuses on leadership behaviors, as these are more proximal to the well-being of followers than leader characteristics such as personality traits, and the recent literature has provided comprehensive reviews of the link between leader characteristics and leader behaviors (e.g., DeRue, Nahrgang, Wellman, & Humphrey, 2011). To organize the literature, we applied a taxonomy that distinguishes between types of leadership behaviors. Yukl proposed a hierarchical taxonomy based on three major types of

leadership behavior: task, relations and change-oriented (Yukl, 2013; Yukl, Gordon, & Taber, 2002). Extending Yukl's approach, DeRue et al. (2011) also categorized leader behaviors into Task-oriented, Relational-oriented and Change-oriented and added Passive Leadership (Laissez-faire). DeRue et al. (2011) classified leadership behaviors associated with transactional leadership (Bass & Bass, 2008) such as contingent reward and management-by-exception active, initiating structure, boundary spanning and directive styles as task-oriented. The relational-oriented category includes leadership behaviors such as supportive leadership (e.g., House, 1981) and empowerment leadership (e.g., Amundsen & Martinsen, 2014). We also classified leadership behaviors described as supportive as relational-oriented as they generally tap into the core of relationship-oriented leadership<sup>2</sup>. Change-oriented leadership behaviors comprise transformational, charismatic and inspirational, with passive styles being characterized by management by exception-passive and Laissez-faire (DeRue et al., 2011). Previous meta-analyses have shown that these categories of leadership behaviors have differential validities in predicting not only specific follower behaviors such as performance, but also job satisfaction (e.g., Piccolo et al., 2012; DeRue et al., 2011).

In addition, we distinguish between specific dimensions of well-being to examine relationships between leadership behaviors and employee well-being. Austin and Villanova (1992) raised the issue of operationalizing and measuring criteria in relation to job-role behaviors. In line with recommendations to align predictors and criteria better in research and practice (Austin & Crespino, 2006), performance taxonomies have been developed that differentiate between, for example, task and contextual performance (e.g., Borman & Motowidlo, 1993). The same argument can be applied to the criterion space of work-related well-being, and this points to differential relationships between specific job features and forms of job related well-being (e.g., Crawford, LePine, & Rich, 2010).



Our review centers on the relationship between leadership behaviors and the processes that impact psychological and physical well-being in the employee at the individual level. Psychological well-being is broadly defined in terms of “subjective experience and functioning”, while physical well-being encompasses “bodily health and functioning” (Grant et al., 2007, p. 53). Physical well-being is receiving increasing attention in management research and is an important well-being outcome in the experience of work-related stress (e.g., Ganster & Rosen, 2013). Past reviews have emphasized psychological well-being in relation to leadership (e.g., Skakon et al., 2010), with the exception coming from the medically-oriented literature (e.g., Kuoppala et al., 2008).

Psychological well-being can be operationalized in terms of affective (i.e., feeling, e.g., Warr, 2013) and cognitive processes (i.e., thinking). Both form part of well-being composites or cognitive-affective syndromes which “embody interlinked ideas, recollections, perspectives and mental networks as well as merely affect” (Warr, 2013, p. 80). These include, for example, job engagement, job satisfaction and burnout. We distinguish between positive and negative forms of psychological well-being as leadership behaviors can have differential relationships with these constructs. Within positive forms of well-being, we further differentiate between hedonic well-being, which emphasizes the subjective experience of pleasure, and eudaimonic forms of well-being, which stress subjective vitality (Gallagher, Lopez, & Preacher, 2009; Warr, 2013). Examples of hedonic well-being are contentment, comfort, satisfaction, and serenity (Warr, 2007), while eudaimonic well-being involves “the positive feeling of aliveness” and energy (Warr, 2007, p. 41, citing Ryan & Frederick, 1997) and includes personal growth, learning and vitality as captured in the concept of thriving (e.g., Spreitzer et al., 2005).

In our approach to reviewing the literature, we extend DeRue et al.’s (2011) model of leadership behaviors. In doing so, we distinguish between different kinds of follower

outcomes, focusing on psychological and physical employee well-being. Leadership is inherently a process, and in adopting a similar process approach to Fischer, Dietz and Antonakis (2017) we examine mediators to understand the psychological processes through which leadership behaviors affect follower well-being. From a theoretical perspective, we consider that one of the primary ways in which leader behavior can influence employee well-being, is through the resources that leaders can provide to their followers via their behaviors. COR theory; (Hobfoll, 1989) – which posits that individuals are motivated to acquire and reinvest resources, to grow these further, and protect them in order to avoid losses – is one lens through which to understand these processes. This theory has been widely applied to understand processes leading to well-being, in particular stress, burnout and exhaustion (e.g., Baer et al., 2015; Halbesleben, 2006). More specifically, leaders can enable resources that affect well-being by shaping the work environment through opportunities for rewards, autonomy, skill discretion and being a source of social support themselves (see Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014, for an overview). Through the social interaction with leaders, followers form beliefs about themselves and their work environment (see social information processing theory: Salancik & Pfeffer, 1978) and their ability to acquire and build resources (Halbesleben et al., 2014).

### **Method: Coding Procedures and Selective, Qualitative Review**

#### **Literature Search**

We searched relevant online databases (Business Source Complete, Medline, PsycINFO, and Psychology and Behavioural Sciences Collection via the EBSCOhost research databases) for articles that were published until February 2017. Search terms included: (1) *leader\**, *manager\**, *supervisor\**; (2) *employee\**, *subordinate\**; and (3) “*job satisfaction*”, “*well-being*”, *wellbeing*, *health*. These search terms had to be stated within the article’s abstract. Search results were then limited to articles published in English and peer-

reviewed academic journals. Consequently, the literature search identified 5,301 potentially relevant articles. In the next step, duplicate articles were removed and the articles' title and abstract were screened applying the following inclusion criteria: article covers an empirical study which (1) investigates an association between leadership and employee well-being (i.e., psychological and physical); (2) includes a measure of leadership style or specific leader's behavior, as well as a measure of employees' psychological or physical well-being; (3) does *not* measure destructive or abusive leadership styles or leaders' traits/personality; and (4) the respective journal's impact factor is equal to or higher than 1.0 (based on the Journal Citation Reports 2015). We chose this impact factor as an inclusion criterion to ensure that our review drew on studies that are generally representative of research in the field and met standardized criteria for research quality. We only included studies that empirically examined mediation as our review focused on processes in the leadership behavior-employee well-being relationship.

This screening process resulted in 384 articles of which 381 full-texts were retrievable. Next, the full-texts were screened by the author team and two research assistants to confirm the relevance of the article based on the listed inclusion criteria and to assess whether the discussed study examined a mediation process. The final sample of articles that examined leadership behaviors, employee well-being and deployed a mediation model was 72, which were then coded in depth.

### **Coding of Primary Studies**

Data were extracted and coded by the author team and one research assistant using a standardized format. The articles were coded for research design, sample size, type of sample, context, theoretical approaches underlying the studies, leadership behavior, well-being constructs, mediators and moderators and results were briefly summarized. Leadership behaviors were classified according to the DeRue et al. (2011) framework (see taxonomy further below) and employee well-being constructs were categorized as psychological or

physical. If the well-being constructs were psychological, they were further coded as either positive (hedonic or eudaimonic), or negative. After agreeing on coding criteria, definitions for categories to be coded were provided and four authors and one research assistant coded 15 articles. Fleiss kappa was computed, a well-established measures of agreement for more than two raters (Fleiss, 1971), indicating high agreement for coding leadership behaviors (Fleiss kappa = 0.74) and perfect agreement for coding well-being constructs as dependent variables (Fleiss kappa = 1.0). Following that, all articles were coded by four authors and the research assistant. As an additional check, all coding was reviewed by one author and the research assistant, with identified inconsistencies (e.g., categorization of leadership behaviors) subsequently being discussed until consensus was reached. The Appendix table provides an overview of all reviewed studies, organized by leadership behavior and well-being criteria.

## **Results**

### **1. Mediator Pathways by Which Leadership Behavior Affects Employee Well-Being**

As our literature search revealed, most studies on leadership behavior and employee well-being did not examine mediators, clearly reflecting that the mechanisms through which leadership behavior affects employee well-being have not been comprehensively studied in the extant literature. Of the 72 studies that we identified, 49% examined one mediator, 35% examined two mediators and 17% more than two. Based on the resource-based perspective of COR theory (Hobfoll, 1989) and our reading of the literature, we organized mediators in the leadership-employee well-being relationship into five theory-driven groupings, which we applied in our review to categorize mediators. These mediator groupings and their theoretical basis are summarized below (see also Table 1 for an overview with example constructs):

(a) Social-cognitive, based on social learning theory (Bandura, 1977, 1982), and social information processing (Salancik & Pfeffer, 1978), encompassing mediators such as

self-efficacy, confidence related constructs (e.g., Stajkovic, 2006) and justice perceptions (e.g., Colquitt, 2001). Leaders play an important role in framing the experience, being part of and shaping the social environment of their employees. Salancik and Pfeffer (1978) emphasize that the immediate social context is an important source of information for constructing meaning “through guides to socially acceptable beliefs, attitudes and needs, and acceptable reasons for action” (p. 227), and makes specific information more salient and shapes expectations concerning behavior. Embedded in a social context, a person’s self-efficacy increases through enactive attainment, mastery experiences (e.g. of new challenging tasks), vicarious experiences, which involve observing the performance of others (e.g. Bandura, 1982), and verbal persuasion – all processes that leaders can influence.

The social-cognitive category also includes attributions about the organization (e.g., corporate social responsibility induced attributions, Ellen, Webb, & Mohr, 2006), vision integration (Kohles et al., 2012) and fit with work culture alignment and strategy (Biggs, Brough, & Barbour, 2014). Psychological empowerment (Conger & Kanungo, 1988; Spreitzer, 1996) was also assigned here – a mediator that partially overlaps with the motivational category below as it also involves aspects related to meaningfulness.

(b) Motivational through job design (Hackman & Oldham, 1976), including, for example, job autonomy and task variety. The motivational path also encompasses behavior regulation and need fulfilment as posited by self-determination theory (e.g., Deci & Ryan, 2000). Work provides the opportunity for individuals to meet needs for competence, affiliation and autonomy (Deci & Ryan, 2000) and numerous studies have shown that job characteristics are linked to employee well-being (Crawford, LePine, & Rich, 2010; Fried & Ferris, 1987). The leader shapes the followers’ work environment and access to resources (e.g. autonomy, allocation of interesting tasks) and thus their motivation.

(c) Affective based on Affective Events Theory (Weiss & Cropanzano, 1996) and the emotion as information model (van Kleef et al. 2009; see also Gooty, Connelly, Griffith, & Gupta, 2010, for an overview), comprising direct measures of a leader's affect, mood and emotions. Leadership behavior influences follower affect through the direct display of their own emotions (e.g. van Kleef et al. 2009) as well as through events that trigger follower emotions (e.g. a positive or negative appraisal). We included in the grouping of affective mediators also follower affect and well-being, containing affective elements such as thriving and work engagement, as several studies tested such mediators, proposing these as resources (e.g. Hildenbrand, Sacramento & Binnewies, 2016). This pathway emphasizes the followers' affect that is triggered by leadership behaviors such as communicating an inspiring vision, a key component of transformational leadership (Bass, 1985), which is suggested to energize followers (Hildenbrand et al., 2016).

(d) Relational, rooted in social exchange theories and leader-member exchange (Blau, 1964; Graen & Uhl-Bien, 1995) and perceptions of interpersonal justice (Colquitt, 2001). The followers' perceptions of the interaction and relationship with the leader can be a form of support, a resource for followers, affecting their well-being (Halbesleben et al., 2014). Trust in the leader, for example, reflects the followers' "perceptions of being able to communicate openly with the supervisor on job-related problems without fear of negative repercussions" (Fulk, Brief & Barr, 1985) and has been linked to well-being (e.g. Braun, Peus, Weisweiler, & Frey, 2013).

(e) Identification-related mediators, theoretically grounded in social identity theory (Tajfel & Turner, 1986) and job identity (Kanungo, 1982), which have been linked to well-being (e.g., Greenaway, Haslam, Cruwys, Branscombe, Ysseldyk, & Heldreth, 2015). Leaders shape their followers' self-concept through enabling the formation of a collective identity that followers integrate as part of their own identity (Lord & Brown, 2001). The

followers' identification with the leader has been recognized as a "conduit through which leadership has many of its effects" (Ashforth, Schinoff, & Rogers, 2016, p. 28). Leadership behavior can also impact the followers' identification with the organization, team and their job (Ashforth et al., 2016), which in turn is likely to enhance employee well-being (Steffens, Haslam, Schuh, Jetten, & Van Dick, 2017).

– Insert Table 1 about here –

As can be seen in Figure 1, most papers focused on social-cognitive mediational paths (often: self-efficacy, psychological empowerment) and relational mediators (in particular trust and leader-member exchange), followed by motivation-related mediators that focused on job design (e.g. measuring task variety, autonomy and meaningfulness), job demands and self-determination theory (satisfied needs). Few papers focused on the affective and identification pathways and we did not identify a single study that conceptualized the leaders' affect (rather than the followers') as a mediator. The under-used affective and identification mediational pathways were surprising, given that the leadership process has a strong affective component (e.g., Gooty et al., 2010) and that the identification with the leader is an important aspect in the leadership process (e.g., DeRue et al., 2011; van Knippenberg & Sitkin, 2013). Another notable observation is that with the exception of a few studies that examined group level mediators (e.g., group identification), most mediators were measured through the followers' perspective – a point that we also discuss under methodological issues. None of the reviewed studies considered the leader's perspective. The leader's view, however, would be a valuable additional perspective to help disentangle leader and follower actions, thoughts and cognitions in mediational processes.

Although well-executed studies provided some theoretical arguments for examining these mediators, often drawn from leadership theory (e.g., Braun et al, 2013), many studies cited separate theoretical approaches for specific mediators or previous empirical research

and an overall rationale for choosing specific mediators in relation to a particular leadership behavior or several mediators was often lacking. None of the studies we reviewed explicitly addressed potential endogeneity issues (Fischer et al., 2017). Even when (non-hypothesized) differential relationships between leadership behaviors and different types of well-being criteria were observed, discussions typically did not raise the question of whether the chosen mediators were the most appropriate ones. In sum, our five theory-driven mediator groupings point to a lack of studies examining affective and identification-related mediators. Most frequently assessed mediators were of social-cognitive kind, followed by relational ones.

## **2. Differential Relationships Between Leadership Behaviors and Employee Well-Being**

The most frequently examined leadership behaviors were change-oriented with the majority of studies measuring transformational leadership (e.g., Braun et al., 2013; Nemanich & Keller, 2007; Vlachos, Panagopoulos, & Rapp, 2013). This was followed by forms of relational-oriented leadership behaviors such as empowerment leadership (e.g., Amundsen & Martinsen, 2015). Few studies included task-oriented leadership, and in all but one study this was as an additional leadership behavior measured alongside change-oriented leadership (e.g., Ertureten, Cemalcilar, & Aycan, 2013). Only three studies examined a form of passive leadership (e.g., Barling & Frone, 2017). Leadership behaviors not captured by the DeRue et al. (2011) classification included ethical leadership (Brown, Treviño, & Harrison, 2005) and authentic leadership (e.g., Neider & Schriesheim, 2011).

Most studies measured positive forms of well-being rather than negative ones. Within positive well-being, studies predominantly focused on hedonic forms, often as the only dependent well-being variable (typically job satisfaction: e.g., Hobman, Jackson, Jimmieson, & Martin, 2011; Zhu & Akhtar, 2014). Eudaimonic forms of well-being were under-represented, but there are a growing number of studies focusing on eudaimonic well-being (usually coming from the well-being rather than the leadership and organizational behavior



literature) (e.g., Hentrich et al., 2007; Nielsen, & Munir, 2009). We only identified five studies that examined physical forms of well-being (e.g., sleep quality; Munir & Nielsen, 2009), all measured through self-report (e.g., using the General Health Questionnaire by Goldberg & Hillier, 1979).

As the literature on leadership behavior and employee well-being that also considers mediational processes is still emergent (Arnold, 2017), the evidence for differential mediational processes was limited. Many studies measured transformational leadership and job satisfaction and the strongest evidence (in terms of number of studies and consistency) points to positive mediation effects for change-oriented leadership and positive, hedonic well-being through relational (trust: e.g., Braun et al., 2013, Gilstrap, & Collins, 2012; climate: Nemanich & Keller, 2007) and social cognitive pathways (e.g., empowerment: Barroso Castro, Villegas Perinan, & Casillas Bueno, 2008; Choi, Goh, Adam, & Tan, 2016; collective efficacy: Walumbwa, Peng, Lawler, & Kan, 2004). Results were not entirely consistent for relational mediators, possibly depending on the cognitive or affective emphasis of the relational aspect. For example, Pillai, Schriesheim, and Williams (1999) examined the positive effect of transformational and transactional leadership on job satisfaction via serial mediation through distributive and procedural justice perceptions (social cognitive mediators), then trust, but the path from trust to job satisfaction (and hence the mediation) was not statistically significant. Measuring trust as mediator, Zhu and Akhtar (2014) applied McAllister's (1995) distinction between cognitive and affective trust in leaders, concluding that affective but not cognition-based trust mediated the positive relationship between transformational leadership and job satisfaction.

Few studies examined the identification and affective pathways. Among those that did explore these pathways, Lian, Brown, Tanzer and Che (2011) found identification with the leader mediated the positive relationship between change-related leadership and hedonic

well-being (Lian et al., 2011) in two samples, while identification with the organization was only found to be a statistically significant mediator in one sample. Similarly, Cicero et al. (2007) reported a statistically significant effect for identification as a mediator, but the study by Hobman et al. (2011) did not (both studies measured group identification at the individual level). Hildenbrand et al. (2016) conceptualized thriving as a mediator (affective pathway), and found that it mediated the relationship between transformational leadership and burnout, with transformational leadership being positively related to thriving, which in turn was negatively related to burnout.

As mentioned earlier, only a small number of studies examined task-oriented leadership behaviors. Studies that measured both change-oriented and task-oriented leadership behavior suggest that these behaviors are differentially related to well-being outcomes, with transformational leadership being positively related to well-being through motivational constructs with intrinsic focus, while this was not the case for transactional leadership (e.g., Sung Min & Rainey, 2008). Ertureten et al. (2013) found workplace bullying to be a mediator between several leadership behaviors and hedonic well-being, but the magnitude of relationships was higher for transactional and authoritarian leadership compared to transformational and paternalistic leadership. Transformational, transactional and paternalistic leadership were negatively related to workplace bullying, while authoritarian leadership was positively related to it. Workplace bullying in turn was negatively related to job satisfaction.

The very few studies that examined passive leadership behavior report a negative link with employee hedonic well-being through identification related (psychological ownership of the organization in small business: Bernhard & O'Driscoll, 2011), motivational (role overload, role conflict, role ambiguity: Barling & Frone, 2017) and relational (trust: Kelloway, Turner, Barling, & Loughlin, 2012) mediators.

It is difficult to draw conclusions about how leadership behavior affects eudaimonic forms of well-being due to the paucity of studies and inconsistent results. Most studies that examined eudaimonic well-being focused on change-oriented leadership and often examined motivational pathways such as job design or job demands, showing positive mediation effects (e.g., Nielsen, & Daniels, 2012; Arnold, Turner, Barling, Kelloway, & McKee, 2007; Hetland et al., 2015). Several studies also found positive effects for relational leadership through relational and social-cognitive mediators (e.g., Biggs, Brough, & Barbour, 2014; Choi, Tran, & Kang, 2016) and motivational ones (e.g., Tuckey, Bakker, & Dollard, 2012). A number of studies which assessed hedonic and eudaimonic well-being simultaneously provide some selective insight into differential processes. For example, Nielsen, Yarker, Brenner, Randall and Borg, (2008) found that transformational leadership was positively related to eudaimonic well-being through motivational mediators but via an identification-related mediator for hedonic wellbeing. Nielsen, Yarker, Randall, & Munir (2009) found that self-efficacy (social cognitive mediator) mediated the positive relationship between transformational leadership and eudaimonic well-being, but not with hedonic well-being, while team efficacy (also a social-cognitive mediator) mediated the positive relationship for both outcomes.

Based on the limited number of studies that measured negative well-being, it appears there are differential relationships between leadership behaviors and/or mediators to positive well-being and negative well-being. For example, Liu, Siu and Shi (2010) found that change oriented leadership was positively related to job satisfaction and negatively related to perceived job stress through relational and social-cognitive mediators. They found that the effects were larger for the social-cognitive than the relational pathway predicting negative well-being, while they were similar for hedonic well-being. Holstad, Korek, Rigotti and Mohr (2014) found that the relational mediator of supervisory social support only mediated the

negative relationship between transformational leadership and irritation when the employees' professional ambition was moderate to high.

Taken together, several key observations address our second and third research goals. The literature has predominantly focused on the relationships between change-oriented leadership behaviors and hedonic types of well-being, which appear to be primarily mediated (based on limited evidence) through social-cognitive (e.g. self-efficacy, empowerment) and relational (e.g., trust) mediators. Expanding the well-being criterion space enabled us to point to gaps in the literature and to inconsistencies in research findings in those few studies that have examined eudaimonic and negative forms of well-being. These inconsistencies are likely to be rooted in theoretical and methodological issues which we discuss in the following section.

### **3. Theoretical Issues**

We argued that theoretical approaches are strongly rooted in leadership approaches, originally developed with performance and organizational effectiveness criteria in mind. Reviewing the literature confirmed this assertion. Generally, studies did not provide a strong theoretical basis for the mechanisms that explain the relationship between specific leadership behaviors and employee well-being. For example, most studies measured change-oriented leadership behaviors, usually as transformational leadership, which has been criticized for conceptual shortcomings (van Knippenberg, & Sitkin, 2013), reflecting a lack of research investigating a comprehensive range of leadership behaviors in relation to well-being. In many of these studies, theory development relied on the conceptualization of transformational leadership (e.g., Bass, 1985) and past research that showed links between transformational leadership and performance (van Knippenberg & Sitkin, 2013).

Similarly, no coherent theoretical overall framework was evident in the choice of mediators. For example, when trust was proposed as a mediator (relational), trust-based

theories (e.g., Mayer, Davis, & Schoorman, 1995) were commonly cited and several studies measuring motivational mediators tended to focus on job design (e.g., Hackman & Oldham, 1976) or self-determination theory (Deci & Ryan, 2000). COR theory (Hobfoll, 1989, 2001) and other resource-based approaches (e.g., job demands-resources theory: Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), were more likely to be applied in studies that did not focus on job satisfaction as the (sole) well-being outcome variable (e.g., Braun & Peus, 2016; Hildenbrand et al., 2016; Tuckey et al., 2012). Very few studies provided well-developed theoretical justifications for why the chosen well-being construct(s) were examined in relation to one or several leadership behaviors. Linked to this point, very few studies attempted to conceptually align leadership behavior predictors and well-being criteria, let alone mediators. For an example of where the predictor, mediator and well-being criteria were conceptually concordant, Koch and Binnewies (2015) examined the effect of supervisors' work-home segmentation behavior on the employees' well-being (exhaustion and disengagement which) – a process suggested to be mediated by job involvement, employee perceptions of their supervisor's work-life friendly role modelling and emotional work-life support.

As expected, hedonic well-being in the form of job satisfaction was the most commonly used well-being variable. In addition, many studies viewed job satisfaction as part of organizational or employee performance outcomes, without considering differential relationships with the other outcomes investigated (e.g., Liao, Wayne, Liden, & Meuser, 2016). A recurrent justification for choosing job satisfaction as a dependent variable is that it is a frequently studied variable in organizational research and an antecedent of organizational outcome variables such as performance and turnover.

When conceptual models were presented for hypothesis generation, they were often not specifically developed with regard to well-being, but rather to predict a whole range of

outcomes (e.g., job satisfaction alongside in-role performance and helping, Liao et al., 2016). When discrepant mediation effects were found for leadership behaviors and well-being and performance-related variables, possible differential processes were typically not discussed in depth (e.g., Liao et al., 2016). As part of the theory building process, approaches such as COR theory (Hobfoll, 1985) were applied, but the proposed underlying mechanisms were often not explained. Exceptions are studies such as Hildenbrand et al. (2016) that developed models to explain in more depth why, for example, transformational leadership should have an impact on burnout via other well-being resources. Hildenbrand et al. (2016) used COR theory as the theoretical starting point to predict employee burnout, applying a taxonomy by Ten Brummelhuis and Bakker (2012) to distinguish between specific types of resources (e.g. contextual vs. personal). Their model proposed leadership to be a contextual resource that affects personal resources (here: thriving), which in turn were suggested to be negatively related to burnout. Boundary conditions were also considered in the form of the personality trait openness to experience, which the authors conceptually linked to the leadership construct, mediator and well-being outcome.

Considering a resource-based perspective, it is surprising to find that negative relationships of positive leadership behaviors on employee well-being and underlying processes were – with very few exceptions – neglected, both theoretically and empirically. Hartline and Ferrell (1996) concluded that empowering leadership can have positive and negative effects on followers (p. 62): while “empowered employees gain confidence in their abilities, they also experience increased frustration (conflict) in their attempt to fulfill multiple roles at the organization's boundary”. They observed that empowered employees took on added job responsibilities which increased self-efficacy but also role ambiguity and indirectly reduced job satisfaction. Baer, Dhensa-Kahlon, Colquitt, Rodell, Outlaw and Long (2015) explicitly addressed the question of whether there can be “too much of a good thing”,

finding that over time feeling trusted by the leader can result in higher perceived workload and emotional exhaustion.

#### **4. Methodological and Measurement Issues**

Although mediational models imply a temporal process (e.g., Fischer et al., 2017) most studies were cross-sectional. Thirteen studies were longitudinal or incorporated a longitudinal study in addition to a cross-sectional study. When the research design was time lagged or longitudinal, little justification was provided for why the given time lag was chosen. Only one study (Hetland et al., 2015) investigated fluctuations over shorter periods of time by employing a diary study design (in combination with a cross-sectional study). There was a lack of experimental studies or semi-experimental field studies – we only identified two studies (Biggs et al., 2014; Braun & Peus, 2016).

Results revealed inconsistencies between cross-sectional and longitudinally collected data. For example, when examining change-related leadership and eudaimonic well-being, Gillet, Fouquereau, Bonnaud-Antignac, Mokoukolo and Colombat (2013) reported positive mediation effects in a cross-sectional study, proposing sequential motivational and social-cognitive mediators, while Nielsen and Munir (2009), examining a social-cognitive mediator, together with Nielsen, Randall, Yarker, and Brenner (2008), using motivational pathways, only found a direct effect in their longitudinal study, but no mediation effect. Tafvelin, Armelius, and Westerberg (2011) found only an indirect effect of transformational leadership on hedonic well-being through a relational pathway when measured longitudinally. The results of these studies illustrate the complexity of examining process models and based on the existing findings, we cannot isolate effects of different mediational constructs from research design issues. Differential processes can work in many ways, considering the number of leadership behaviors, mediation pathways and employee well-being constructs, however the extant literature does not provide sufficient answers on how these processes

work. Two types of processes are worth highlighting as they have clear implications for leadership development. For example, (1) leadership behaviors may influence a particular kind of well-being through different mediational pathways; (2) the same leadership behavior may have differential effects on multiple forms of well-being via different mediational processes. As discussed earlier, our review points to some limited evidence that change-oriented leadership has an effect on hedonic well-being through social-cognitive and relational pathways. Not enough studies are available on other leadership behaviors to provide insight into how other leadership behaviors may influence hedonic well-being and through which mediational pathways.

Mediational pathways can also work differently depending on whether mediators are group or individual level constructs. For example, Nielsen and Daniels (2012) examined the relationship of transformational leadership (measured at group level and as individual differentiated perceptions from the group level) and job satisfaction (hedonic), vitality (eudaimonic), burnout (negative) and sleep quality (physical). Three mediators were proposed: meaningful work and role conflict (motivational) and cohesion (relational). At the group level, significant mediators were perceptions of meaningful work and role conflict for vitality, plus cohesion for job satisfaction. At the individual level, relationships between differentiated transformational leadership were mediated by social support, cohesion, role conflict and meaningful work (motivational mediators) for job satisfaction, while only meaningful work was a mediator for vitality and sleep quality. Nielsen and Daniels (2012, p. 392) conclude that “these group-level perceptions of working conditions appear to be related to individual-level well-being to a lesser extent than differentiated perceptions”.

Most studies measured all constructs (i.e., leadership behaviors, mediators, well-being variables) through the employees' (followers') perspective. Forty-one studies (56%) included remedies to deal with potential issues resulting from using same source, same method data



(Podsakoff, MacKenzie, Jeong-Yeon, & Podsakoff, 2003). These included temporally separating data collection, assuring respondents' anonymity and use of the Harman's single factor test (Harman, 1967). The majority of the remedies either involved survey design or a statistical approach. Exceptions were studies that assessed leadership behaviors from the leader's perspective, treating it as a group-level variable (empowerment leadership assessed by the leader of a work group: Tuckey et al., 2012) or mediators measured through group-level perspectives (work group identification as a mediator: Hobman, Jackson, Jimmieson, & Martin, 2011: group-level justice perceptions as a mediator: Kiersch & Byrne, 2015). Only five studies considered physical well-being measures such as sleep quality (Munir & Nielsen, 2009; Nielsen & Daniels, 2012) and stress symptoms (Liu, Siu, & Shi, 2010)., which were also measured through self-report, and none of the studies that we identified used physiological measures.

In sum, theoretical, conceptual and methodological approaches are under-developed in research examining mediation processes in the leadership behavior-employee well-being relationship. To address these issues, we discuss implications for a future research agenda next.

### **Implications for Research on Leadership and Employee Well-Being**

In this section we summarize the key outcomes of our review and discuss implications for future research, focusing on theoretical and then methodological considerations. A limitation of our review is that it is selective: while our literature search did include papers from several disciplines and a wide range of search terms, our inclusion criteria restricted the number of studies we reviewed. We believe, however, that the 72 papers that we reviewed enabled us to identify several theoretical and methodological key issues in the literature.

### **Theoretical Considerations**

Based on our systematic review there is no coherently organized theoretical approach in the literature that is being applied to examine the relationships between leadership behavior and different aspects of employee well-being. Theoretical approaches that can help us to develop the research agenda further include resource-focused approaches (e.g., Hobfoll, 1989) and a more process-oriented perspective (Fischer et al., 2017). Below we draw attention to gaps and issues in the literature that surfaced from our literature review and implications for future research.

As our review has shown, hedonic forms of employee well-being, usually measured in the form of job satisfaction, were overrepresented, while eudaimonic forms of well-being (e.g., work engagement, thriving) were underrepresented. Furthermore, most of the studies in our review focused on positive forms of well-being, but with increasing interest in leadership research on negative forms of follower well-being such as stress (Harms et al., 2017) and burnout (e.g., Montano et al., 2017), more research is needed that also considers mediational processes for these well-being constructs. Very few studies we identified examined negative forms of psychological well-being such as irritation (Mohr et al., 2009). Physical measures of well-being (e.g., sleep quality) were also under-researched and warrant inclusion in future research.

A systematic comparison across leadership behaviors, mediational processes and more wide-ranging forms of employee well-being (covering hedonic and eudaimonic forms of positive well-being, negative well-being physical well-being) was not possible. Although the few studies that investigated several forms of employee well-being (e.g., Nielsen, Yarker, et al., 2008; Nielsen et al., 2009) suggested differential relationships in relation to positive, hedonic and eudaimonic forms of well-being. More research is required, but findings point to differential paths through which leadership behaviors work, for example self-efficacy (social-cognitive) being more central for energized forms of well-being (Nielsen et al., 2009), while

relational (e.g., cohesion) and motivational, supportive mediators (e.g., social support) appeared to be more important for hedonic well-being such as job satisfaction. When mediators were measured at the group level (e.g., leader vs. group identification, self-efficacy vs. team efficacy) different relationships with well-being outcome variables were also observed (e.g., Nielsen & Daniels, 2012). Future research needs to address the question of the relative importance of specific leadership behaviors and mediators in predicting different forms of well-being. Linked to our next point, such an investigation needs to be theory-driven. Piccolo et al. (2012), for example, provided evidence for the relative impact of complementary leader behaviors in relation to performance and job satisfaction.

From a theoretical perspective, mediational pathways and their underlying proposed mechanisms need to be better understood. Guest (2017) commented on research conducted in Human Resource Management: “while progress in the field is acknowledged, it is claimed that the search for a link between HRM and performance has been pursued at the expense of a concern for employee well-being (p. 22)”. The same observation holds for research on leadership and employee well-being. As discussed earlier, many papers overly relied on leadership and performance-related theories or past empirical research and fell short on developing an overarching theoretical approach for the proposed conceptual models. For example, if several mediators were examined, there was no clear overarching rationale for examining the chosen mediators together although theoretical arguments were provided for each of the mediators separately. Exceptions included theorizing based on self-determination theory, where mediational pathways were tested derived from specific propositions from the theory (e.g., specific types of behavioral regulation: Güntert, 2015). Furthermore, only some studies controlled for the simultaneous effects of several mediators on the proposed well-being outcome variable(s). Approaches that did consider well-being as the focal construct

included COR theory (Hobfoll, 1989), other resource-based approaches (e.g., ten Brummelhuis & Bakker, 2012) and recovery theories (Meijman & Mulder, 1998).

### **Methodological Considerations**

Mediation models by implication involve changes over time whereby the predictor variable has an effect on an outcome variable through a mediational process (e.g., Fischer et al., 2017). Furthermore, employee well-being can be conceptualized as state or trait well-being (e.g., Warr, 2013), and wellbeing outcomes can be short-term (e.g., daily stress) or long-term (e.g., burnout). As Warr points out (2013, p. 78): “Whatever the specific form of measurement to be used, it is essential to review in advance alternative target durations to ensure that a chosen duration matches that of the construct and question being investigated.” Most studies reviewed here relied on cross-sectional designs and when longitudinal designs were employed little justification was given for the chosen time lags. We only identified one diary study that measured leadership behaviors, mediators and employee-well-being. Overall, little theoretical justification was provided in the reviewed papers on the choice of construct and measurement of the well-being outcome variables.

Furthermore, construct and measurement validity issues have been raised for frequently examined leadership behavior constructs such as transformational leadership (e.g., van Knippenberg, & Sitkin, 2013), which might affect relationships with mediators and well-being outcome variables. Furthermore, most studies (with the exception of a very small number of studies using group level assessments) relied on follower perceptions of leadership behaviors, mediators and their own well-being. We will expand on these issues when discussing directions for a future research agenda.

## **Research on Leadership and Employee Well-being – Towards a Future Research**

### **Agenda**

#### **Advancing Theory in Research on Leadership and Employee Well-Being**

We propose to further develop the application of COR theory (Hobfoll, 1989, 2001) in research on leadership and employee well-being by applying ideas from the revised form of adaptation theory of well-being by Diener et al. (2006). Adaptation theory (Brickman & Campbell, 1971) posits that after positive or negative events take place, “people quickly adapt back to hedonic neutrality” (Diener et al., 2006, p. 305), suggesting an “automatic habituation model in which psychological systems react to deviations from one’s current adaptation level (Helson, 1948, 1964)” (Diener et al., 2006, p. 305). Central tenets underlying the modified version by Diener et al. (2006) is that levels of well-being can change (e.g., through external influences) and that there are differences between and within people in the way that we adapt to events and over time - we have different so-called hedonic set points. We apply some of the central ideas of the modified version of adaptation theory below in relation to broadening the well-being criterion space and viewing the leadership process from a resource perspective.

**Expanding the well-being criterion space and examining mediators.** Future research needs to be based on a more conscious, theory-driven choice of leadership behaviors and well-being criteria by taking into the multi-faceted effects of leadership and investigation of “underexplored, conceptually relevant criteria” (Hiller, DeChurch, Murase & Doty, 2011, p. 1171). As suggested by Diener et al. (2006), people have different set points and “a single person may have multiple well-being set points: Different components of well-being such as pleasant emotions, unpleasant emotions, and life satisfaction can move in different directions” (p. 306).

That means that different types of well-being might not “work” in the same way – leadership behaviors might affect them differently and through different (mediational) processes. Furthermore, different forms of well-being can co-exist (e.g., Warr, 2013): e.g., feeling job engaged (eudaimonic) and exhausted (negative) working on a challenging project.

Different effects of leadership behavior on employee well-being can be partly attributed to a lack of conceptual alignment of leadership behaviors, mediators and well-being criteria. A more differentiated choice of employee well-being outcomes is needed, especially in relation to specific mediational pathways. While performance taxonomies have been established for the performance criterion space (e.g., Bartram, 2005; Borman & Motowidlo, 1997) and are increasingly being applied in leadership research, there is a lack of conceptual clarity for choosing and measuring well-being criteria. We differentiate between specific forms of well-being (i.e., hedonic, eudaimonic and negative) and suggest adopting this structure for developing hypotheses to predict differential relationships between leadership behaviors, mediators and well-being outcomes.

As adaptation theory underscores, there might be different trajectories in the way that different types of well-being develop. To better understand trade-off effects among well-being criteria (e.g., Grant et al., 2007), future research also needs to include more forms of employee well-being, covering hedonic and eudaimonic forms of well-being, as well as links/trade-offs with specific forms of negative well-being. For example, change-oriented leadership behavior involves by its very definition, change and energy investment from the follower. It is associated with higher levels of employee well-being (e.g., Skakon et al., 2010) but the high energy investment may lead to well-being trade-off effects as “transformational leaders motivate their followers to transcend their own self-interests for the sake of the group” (Bass, 1985; as cited in Walumbwa et al., 2004, p. 516). An example of a well-being trade-off effect would be if employees are highly work engaged, working long hours, leading to burnout or exhaustion in the longer term. Nielsen and Daniels (2016) examined transformational leadership and follower sickness absence and concluded: “Our results suggest a complex picture of the relationship between transformational leadership and sickness absenteeism; transformational leaders may promote self-sacrifice of vulnerable

followers by leading them to go to work while ill, leading to increased risks of sickness absence in the long term (p. 193).”

Moreover, leaders can have more than one behavior towards followers such as affiliation and dominance (e.g., Solomon 1981). The extent to which so called paradoxical behaviors can be reconciled is likely to affect employee well-being. Zhang, Waldman, Han, and Li (2015) found that leaders who can reconcile paradoxical behaviors through, for example, holistic thinking have followers who are more adaptive and proactive.

As one of its key principles, COR theory (Hobfoll, 1985) posits “the idea that it is psychologically more harmful for individuals to lose resources than it is helpful for them to gain the resources that they lost” (Halbesleben et al., 2014, p. 2). Hardly any of the reviewed studies addressed this point by examining the offset of resource losses against resource gains through different mediation pathways – one exception being the study by Baer et al. (2015) which examined the extent to which perceived workload, pride and reputation maintenance simultaneously mediated the relationship between feeling trusted by one’s supervisor and emotional exhaustion. The complex mechanisms that underlie the relationships between leadership behaviors and employee well-being outcomes might be better understood by viewing mediation mechanisms in terms of resource losses as well as gains in relation to several forms of well-being. Such an approach would also help to understand and predict trade-off effects between well-being and performance. For example, Baer et al. (2015) show that feeling trusted was linked to lower performance through the different mediator pathways leading to higher levels of exhaustion. Another key principle of COR theory postulated by Hobfoll (2001) is that even the threat of resource loss can negatively impact well-being. Very few studies addressed this process through a mediational path – exceptions are studies that found helplessness (Sparr & Sonnentag, 2008b) and reputation maintenance (Baer et al., 2015) concerns to mediate (social-cognitive mediators) the relationship between leadership

behaviors and well-being. Resource threat should be investigated in future research through negative mediational paths such as the loss of self-efficacy.

Our mediator groupings suggest differential mechanisms based on specific theoretical approaches for future research. Our groupings also point to several specific pathways that are under-researched (e.g., leader affect, identification with the leader and the work group) and those that are emerging (e.g., relational mediators such as LMX). As differential mediator effects were found for group-level constructs (e.g., group efficacy), future research needs to also conceptualize specific mechanisms at different levels of analysis, also including social support mechanisms through social networks of the leader and follower which have been linked to employee well-being (Cullen-Lester, Gerbasi & White, 2016).

**Boundary conditions and context factors.** As postulated by Diener et al. (2006), people have different set points and also differ in the way they adapt and respond to events which is partly due to influences of individual differences such as personality (e.g., Diener, Suh, Lucas & Smith, 1999). For example, optimistic individuals are more likely to adopt more effective (i.e., problem-focused) coping mechanisms compared to pessimistic ones (e.g., Scheier, Weintraub, & Carver, 1986). The adaptation theory of well-being can therefore guide the choice of moderators to improve the development of explanatory mechanisms underlying the relationship between leadership behaviors, mediators and employee well-being. As Hobfoll (1989) defines resources “as those objects, personal characteristics, conditions, or energies that are valued by the individual” (p. 516) – individual differences (but also states) are likely to influence the extent to which we value resources. Implications for specific mediational pathways are that employees might respond differently to specific pathways, while others might be more generally applicable. Only few studies examined moderators in addition to mediators. These included employee attributes such as openness to experience (Hildenbrand et al., 2016), negative affectivity (Chuang et al., 2012), pride (Baer



et al., 2015) and professional ambition (Holstad et al., 2014) and context factors such as group collectivism (Li, Xu, Tu, & Lu, 2014) and LMX differentiation (Liao et al., 2016). Baer et al. (2015), for example, showed that the relationship between reputation maintenance (a social cognitive mediator) and exhaustion was moderated by pride (also acting as a co-mediator – affective).

Halbesleben, Harvey, and Bolino (2009) found that there can be too much of a good thing in terms of resources and how these interplay with individual differences. They found that high levels of engagement (well-being as a resource) were related to work-life conflict, which in turn had a negative impact on well-being. This relationship was, however, moderated by conscientiousness as well-organized individuals still manage to counter-balance their high workload.

Furthermore, Diener et al. (2006) draw attention to the observation that well-being is influenced by context and can change. Very few studies controlled for context or situational variables. The context or situational variables might also influence how people respond to specific mediators such as leader affect, group cohesion and work characteristics. Future research should not only take the wider context into account, but also consider the choice of moderator variables against the context in which leaders and followers operate (e.g., organizational change, a supportive organizational climate).

**Long-term effects and curvilinear relationships.** Another important principle of adaptation theory is that “individuals differ in their adaptation to events, with some individuals changing their set point and others not changing in reaction to some external event” (Diener et al., 2006, p. 306). This not only suggests individual differences in how we react to leaders, events and contexts, but also that we differ in the way that we react over time.

Leadership research needs to address the temporal nature of how leadership behavior affects employee well-being, a point raised regarding leadership and performance processes (e.g., Fischer et al., 2017), team processes (e.g., Roe, Gockel, & Meyer, 2012) and motivation and well-being (e.g., Roe & Inceoglu, 2016). Employee well-being is malleable and leadership behaviors can change too (e.g., Day, Fleenor, Atwater, Sturm, & McKee, 2014) – a point that is particularly central to leadership development. Fischer et al. (2017) emphasize the role of time effects in the leadership – effectiveness process and we need to develop a theoretical view on time effects that is specific to leadership behavior and employee well-being (see methodological points further below). The need for better inclusion of time is further magnified by the conception of employee well-being, which can be measured as state or trait well-being (e.g., Warr, 2013) – a point that is often not explicitly addressed in studies. Measured as a state, we would expect employee well-being, to be more changeable than leadership behaviors, resulting in potentially different levels of variation across time (Fischer et al., 2017) which may affect relationships between leadership behavior and employee well-being. Furthermore, there might be curvilinear effects of leadership behaviors on employee well-being which could explain trade-off effects. For example, change-oriented leadership behavior involves by its very definition, change and energy investment from the follower. It is associated with higher levels of employee well-being (e.g., Skakon et al., 2010). Continuous demands on the follower, however, might in the longer term negatively affect well-being.

The same considerations apply to mediation paths which involve constructs that can vary: for example, the leaders' emotional display (affective mediator) is likely to be more variable than the level of autonomy or degree of task variety that the follower is given (i.e.: job design, motivational route). Our inductively and theoretically derived mediational groupings are a starting point for systematically thinking through levels of variability across

time in relation to leadership behaviors and forms of well-being. A time-focused theoretical perspective will also need to take into account reciprocal effects of employee well-being on leadership behavior and feedback loops (cf. “predictor-outcome performance spirals”, Fischer et al., 2017, p. 1737).

### **Advancing Methodology in Research on Leadership and Employee Well-Being**

Future research needs to improve research design and measurement. As Diener et al. (2006, p. 311) point out in their form of adaptation theory: “recent findings do place limits on the types of psychological processes that can account for the adaptation that does occur”, calling for more sophisticated research approaches: “Instead, more flexible processes are likely involved, and these processes may vary across events and individuals or even within the same individual over time” (p. 311).

Thus, more longitudinal research is needed with theory-based research designs that provide a good rationale for times of measurement and time lags (e.g., Dormann & Griffin, 2015). Modelling time effects also requires research designs that adequately capture fluctuations in employee well-being such as diary studies. We only identified one study (i.e., Hetland et al., 2015) that applied a diary study design and examined mediation in the relationship between leadership behavior and employee well-being. Diary study designs are increasingly being applied in well-being research and recent studies also include leadership as a focal construct (e.g., leader performance expectations as a moderator” Syrek & Antoni, 2014). Consideration also needs to be given to measures that can assess constructs in a time-sensitive manner (e.g., Roe & Inceoglu, 2016) by adapting time frames and response formats (e.g., Watson, Clark, & Tellegen, 1988). Options include cross-lagged designs (Hakanen, Schaufeli, & Ahola, 2008; Selig, & Little, 2012), which would allow for more rigorous testing of theoretically motivated mechanisms, with appropriate time lags built into the model.

While incorporating more longitudinal research methods would certainly increase the methodological rigor of this field of research, other design elements would also aid in reducing endogeneity and clarifying causal mechanisms. In our paper we have posited that leadership behavior can impact employee well-being via multiple processes simultaneously. Thus, an important methodological challenge for researchers is to disentangle the causal effects of multiple mediators, and ensure that each of the mediators are substantive and not specious. Fischer et al. (2017) recommend two ways of dealing with this issue of endogeneity. First, model multiple mediation paths in a single study and show that each mediator has unique explanatory power (independent of the other mediators). Second, use of sequential randomized experiments to establish the underlying causal process (i.e., separate experiments to show the effect of the independent variable on the mediator and the effect of the mediator on the dependent variable). Although the latter is an ideal method for establishing causation (for a more detailed discussion see Antonakis, Bendahan, Jacquart, & Lalive, 2014), it is often not viable for a variety of reasons (see Cook, Shadish, & Wong, 2008; Rubin, 2008). In such cases, researchers can incorporate more quasi-experimental research designs to disentangle causal effects (Stone-Romero, 2008), supplementing organizational data to better understand the causal process and mechanisms. Further, including multi-source data can reduce common-method bias and endogeneity concerns (Podsakoff et al., 2003; Podsakoff, MacKenzie, & Podsakoff, 2012).

In addition to the inclusion of more rigorous designs, there is also a need for the development of more/better measurements of well-being. For example, the rapid development of portable physiological measures such as wearable technology provides opportunity to incorporate more physical well-being measures in research on leadership and employee well-being. Construct validation concerns are an issue to be tackled in the use of physiological measures (e.g., Chaffin, Heidl, Hollenbeck, Howe, Yu, Voorhees, & Calantone,

2017). The inclusion of theory-driven physiological indicators of well-being allows for a more differentiated approach to well-being and an opportunity to start linking specific types of employee well-being measured through self-perceptions with physiological measures. The employees' perspective of their own well-being is still crucial as this reflects their appraisal of a context or situation and impacts their own well-being directly (e.g., Lazarus, 1991). This would allow us to explore to what extent are eudaimonic forms of well-being (e.g., job engagement, thriving) related to high energy indicators of physiological well-being such as heart rate variability, which has been linked to rumination (Cropley et al., 2017).

Physiological measures using wearable technology also allow for continuous measurement over specific time periods which should also be driven by theoretical considerations (e.g., Roe & Inceoglu, 2016), for example, how quickly do we expect change to be observed in the mediator and well-being variables? How stable are these effects likely to be?

The incorporation of more rigorous research designs (including longitudinal studies and experimental methods) and the addition of more robust measurement of well-being (including physiological measures) would also help tackle issues of common methods bias (e.g., Podsakoff et al., 2003; Podsakoff, MacKenzie, & Podsakoff, 2012). In much of the current research affectively biased perspectives of the follower (e.g., sentiment override: Fincham, Garnier, Gano-Phillips, & Osborne, 1995) and assessments of leadership behavior that are biased by the followers' implicit leadership theories (Brown, Inceoglu, & Lin, 2017), obscure the true relationship between leader behavior and well-being. When several mediators are measured, the simultaneous effect of these on the well-being variable(s) needs to be modelled adequately. In addition, it is vital to understand how much variance is accounted for in the well-being construct(s) through each mediational pathway and when temporally we expect a mediational construct to have an effect on well-being. For example, leader affect can be changed quickly, but changes to work design will take longer. Both types

of mediators also have different long-term consequences. A more cognizant, time-based and theory-driven choice of mediators will also help address issues of endogeneity (Fischer et al., 2017) in the relationship between leadership behaviors and employee well-being.

### **Conclusions**

Our selective, qualitative review distinguished between specific dimensions of employee well-being by distinguishing between hedonic, eudaimonic and negative forms of well-being. We reviewed differential relationships between leadership behavior and specific dimensions of well-being, arriving at the conclusion that the current literature in this area has a default perspective coming from leadership effectiveness and employee performance models. Furthermore, research on employee well-being does not sufficiently consider the inherently dynamic nature of the processes underlying leadership behaviors and employee well-being from theoretical and methodological perspectives. To address these issues, we have integrated COR theory (Hobfoll, 1989) and the adaption theory of well-being (Diener et al., 2006) to develop a theory-driven research approach that considers the process and role of time in the leadership behavior employee well-being relationship. We applied this integrative model to map out an agenda for future research that can advance our understanding of how, why and when leadership impacts well-being.

As a starting point for future research, leadership researchers will need to take employee well-being more seriously as a criterion in and of itself – as an end goal rather merely than as a means to higher performance (e.g., Grant et al., 2007; Guest, 2017). Employee well-being has been shown to be related to higher performance (e.g., Montano et al., 2017) but a shift in our thinking will enable us to be more cognizant about well-being performance trade-offs (e.g., Grant, 2017) and to aim for what Judge et al. (2001) characterized as the holy grail of organizational behavior – sustainable levels of employee performance *and* well-being.

### References

- Amundsen, S., & Martinsen, Ø. L. (2014). Empowering leadership: Construct clarification, conceptualization, and validation of a new scale. *The Leadership Quarterly*, 25, 487-511. doi:10.1016/j.leaqua.2013.11.009
- \*Amundsen, S., & Martinsen, Ø. L. (2015). Linking empowering leadership to job satisfaction, work effort, and creativity. *Journal of Leadership & Organizational Studies*, 22, 304-323. doi:10.1177/1548051814565819
- \*Anseel, F., & Lievens, F. (2007). The long-term impact of the feedback environment on job satisfaction: A field study in a Belgian context. *Applied Psychology: An International Review*, 56, 254-266. doi:10.1111/j.1464-0597.2006.00253.x
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2014). Causality and endogeneity: Problems and solutions. In D. V. Day (Ed.), *The Oxford Handbook of Leadership and Organizations* (pp. 93-117). New York, NY: Oxford Press
- Arnold, K. A. (2017). Transformational leadership and employee psychological well-being: A review and directions for future research. *Journal of Occupational Health Psychology*, 22(3), 381-393. DOI.org/10.1037/ocp0000062
- \*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, 193-203. doi:10.1037/1076-8998.12.3.193
- Ashforth, B. E., Schinoff, B. S., & Rogers, K. M. (2016). "I identify with her," "I identify with him": Unpacking the dynamics of personal identification in organizations. *Academy of Management Review*, 41, 28-60. DOI: 10.5465/amr.2014.0033
- Austin, J. T., & Crespino, T. R. (2006). Problems of criteria in industrial and organizational psychology: Progress, pitfalls, and prospects. In W. Bennett, Jr., C. E. Lance, D. J.

- Woehr, W. Bennett, Jr., C. E. Lance & D. J. Woehr (Eds.), *Performance measurement: Current perspectives and future challenges* (pp. 9-48). Mahwah, NJ: Lawrence Erlbaum.
- Austin, J. T., & Villanova, P. (1992). The criterion problem: 1917-1992. *Journal of Applied Psychology, 77*, 836-874. doi:10.1037/0021-9010.77.6.836
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology, 60*, 421-449. doi:10.1146/annurev.psych.60.110707.163621
- \*Baer, M. D., Dhensa-Kahlon, R. K., Colquitt, J. A., Rodell, J. B., Outlaw, R., & Long, D. M. (2015). Uneasy lies the head that bears the trust: The effect of feeling trusted on emotional exhaustion. *Academy of Management Journal, 58*, 1637-1657. doi:10.5465/amj.2014.0246
- Bandura, A. (1977). *Social learning theory*. Oxford, United Kingdom: Prentice-Hall.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*, 122-147. doi:10.1037/0003-066X.37.2.122
- \*Barling, J., & Frone, M. R. (2017). If only my leader would just do something! Passive leadership undermines employee well-being through role stressors and psychological resource depletion. *Stress & Health, 33*, 211-222. doi:10.1002/smi.2697
- \*Barroso Castro, C., Villegas Perinan, M. M., & Casillas Bueno, J. C. (2008). Transformational leadership and followers' attitudes: the mediating role of psychological empowerment. *International Journal of Human Resource Management, 19*, 1842-1863. doi:10.1080/09585190802324601
- Bartram, D. (2005). The great eight competencies: A criterion-centric approach to validation. *Journal of Applied Psychology, 90*, 1185-1203. doi:10.1037/0021-9010.90.6.1185



- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York, NY: Free Press.
- Bass, B. M., & Bass, R. (2008). *The Bass handbook of leadership: Theory, research and managerial applications* (4th ed.). New York, NY: Free Press.
- \*Bernhard, F., & O'Driscoll, M. P. (2011). Psychological ownership in small family-owned businesses: Leadership style and nonfamily-employees' work attitudes and behaviors. *Group & Organization Management, 36*, 345-384. doi:10.1177/1059601111402684
- \*Biggs, A., Brough, P., & Barbour, J. P. (2014). Enhancing work-related attitudes and work engagement: A quasi-experimental study of the impact of an organizational intervention. *International Journal of Stress Management, 21*, 43-68.  
doi:10.1037/a0034508
- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Borman, W. C., & Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In N. Schmitt & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 71-98). San Francisco, CA: Jossey-Bass.
- Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance, 10*, 99-109.  
doi:10.1207/s15327043hup1002\_3
- \*Braun, S., & Peus, C. (2016). Crossover of work-life balance perceptions: Does authentic leadership matter? *Journal of Business Ethics*. Advance online publication.  
doi:10.1007/s10551-016-3078-x
- \*Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly, 24*, 270-283. doi:10.1016/j.leaqua.2012.11.006

Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good science.

In M. H. Appley (Ed.), *Adaptation level theory: A symposium* (pp. 287-302). New York: Academic Press.

Brown, A., Inceoglu, I., & Lin, Y. (2017). Preventing rater biases in 360-degree feedback by forcing choice. *Organizational Research Methods, 20*, 121-148.

doi:doi:10.1177/1094428116668036

Brown, M. E., Treviño, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior & Human Decision Processes, 97*, 117-134. doi:10.1016/j.obhdp.2005.03.002

Chaffin, D., Heidl, R., Hollenbeck, J. R., Howe, M., Yu, A., Voorhees, C., & Calantone, R. (2017). The promise and perils of wearable sensors in organizational research. *Organizational Research Methods, 20*, 3-31.

doi:10.1177/1094428115617004

\*Chan, K. W., Huang, X., & Ng, P. M. (2008). Managers' conflict management styles and employee attitudinal outcomes: The mediating role of trust. *Asia Pacific Journal of Management, 25*, 277-295. doi:10.1007/s10490-007-9037-4

\*Chiang, C.-F., & Jang, S. (2008). The antecedents and consequences of psychological empowerment: The case of Taiwan's hotel companies. *Journal of Hospitality & Tourism Research, 32*, 40-61. doi:10.1177/1096348007309568

\*Choi, S. B., Tran, T. B. H., & Kang, S.-W. (2016). Inclusive leadership and employee well-being: The mediating role of person-job fit. *Journal of Happiness Studies*. Advance online publication. doi:10.1007/s10902-016-9801-6

\*Choi, S. L., Goh, C. F., Adam, M. B. H., & Tan, O. K. (2016). Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment. *Human Resources For Health, 14*(73), 1-14. doi:10.1186/s12960-016-0171-2

- \*Chuang, A., Judge, T. A., & Liaw, Y. J. (2012). Transformational leadership and customer service: A moderated mediation model of negative affectivity and emotion regulation. *European Journal of Work & Organizational Psychology, 21*, 28-56.  
doi:10.1080/1359432X.2010.532911
- \*Cicero, L., & Pierro, A. (2007). Charismatic leadership and organizational outcomes: The mediating role of employees' work-group identification. *International Journal of Psychology, 42*, 297-306. doi:10.1080/00207590701248495
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*, 386-400. doi:10.1037/0021-9010.86.3.386
- Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review, 13*, 471-482.  
doi:10.5465/AMR.1988.4306983
- Cook, T. D., Shadish, W. R., & Wong, V. C. (2008). Three conditions under which experiments and observational studies produce comparable causal estimates: New findings from within-study comparisons. *Journal of Policy Analysis and Management, 27*(4), 724-750.
- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology, 95*, 834-848. doi:10.1037/a0019364
- Cropley, M., Plans, D., Morelli, D., Sütterlin, S., Inceoglu, I., Thomas, G., & Chu, C. (2017). The association between work-related rumination and heart rate variability: A field study. *Frontiers in Human Neuroscience, 11*, 1-6. doi:10.3389/fnhum.2017.00027
- Cullen-Lester, K. L., Gerbasi, A., & White, S. (2016). The promise and peril of workplace connections: Insights for leaders about workplace networks and well-being. In W. A.

- Gentry, C. Clerkin, W. A. Gentry & C. Clerkin (Eds.), *The Role of Leadership in Occupational Stress (Research in Occupational Stress and Well-being, Volume 14)* (Vol. 14, pp. 61-90). Bingley, United Kingdom: Emerald.
- Day, D. V., Fleenor, J. W., Atwater, L. E., Sturm, R. E., & McKee, R. A. (2014). Advances in leader and leadership development: A review of 25 years of research and theory. *The Leadership Quarterly*, 25, 63-82. doi:10.1016/j.leaqua.2013.11.004
- 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, 227-268. doi:10.1207/S15327965PLI1104\_01
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512. doi:10.1037/0021-9010.86.3.499
- DeRue, D. S., Nahrgang, J. D., Wellman, N. E. D., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, 64, 7-52. doi:10.1111/j.1744-6570.2010.01201.x
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: revising the adaptation theory of well-being. *American Psychologist*, 61, 305. doi:10.1037/0003-066X.61.4.305
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, 125, 276-302. doi:10.1037/0033-2909.125.2.276
- Dormann, C., & Griffin, M. A. (2015). Optimal time lags in panel studies. *Psychological Methods*, 20, 489-505. doi:10.1037/met0000041

- Ellen, P. S., Webb, D. J., & Mohr, L. A. (2006). Building corporate associations: Consumer attributions for corporate socially responsible programs. *Journal of the Academy of Marketing Science*, *34*, 147-157. doi:10.1177/0092070305284976
- \*Ertureten, A., Cemalcilar, Z., & Aycan, Z. (2013). The relationship of downward mobbing with leadership style and organizational attitudes. *Journal of Business Ethics*, *116*, 205-216. doi:10.1007/s10551-012-1468-2
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, *40*, 287-322. doi:10.1111/j.1744-6570.1987.tb00605.x
- Fincham, F. D., Garnier, P. C., Gano-Phillips, S., & Osborne, L. N. (1995). Preinteraction expectations, marital satisfaction, and accessibility: A new look at sentiment override. *Journal of Family Psychology*, *9*, 3-14. doi:10.1037/0893-3200.9.1.3
- Fischer, T., Dietz, J., & Antonakis, J. (2017). Leadership process models: A review and synthesis. *Journal of Management*, *43*, 1726-1753. doi:10.1177/0149206316682830
- Fleiss, J. L. (1971). Measuring nominal scale agreement among many raters. *Psychological Bulletin*, *76*, 378 - 382. doi:10.1037/h0031619
- Fulk, J., Brief, A.P., & Barr, S.H. (1985). Trust-in-supervisor and perceived fairness and accuracy of performance evaluations. *Journal of Business Research*, *13*, 301-313. doi.org/10.1016/0148-2963(85)90003-7
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality*, *77*, 1025-1050. doi:10.1111/j.1467-6494.2009.00573.x
- Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management*, *39*, 1085-1122. doi:10.1177/0149206313475815
- George, G. (2016). Management research in AMJ: Celebrating impact while striving for more. *Academy of Management Journal*, *59*, 1869-1877. doi:10.5465/amj.2016.4006

- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and tackling societal grand challenges through management research. *Academy of Management Journal*, *59*, 1880-1895. doi:10.5465/amj.2016.4007
- George, J. M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of Management Journal*, *50*, 605-622. doi:10.5465/AMJ.2007.25525934
- \*Gillet, N., Fouquereau, E., Bonnaud-Antignac, A., Mokoukolo, R., & Colombat, P. (2013). The mediating role of organizational justice in the relationship between transformational leadership and nurses' quality of work life: A cross-sectional questionnaire survey. *International Journal of Nursing Studies*, *50*, 1359-1367. doi:10.1016/j.ijnurstu.2012.12.012
- \*Gilstrap, J. B., & Collins, B. J. (2012). The importance of being trustworthy: Trust as a mediator of the relationship between leader behaviors and employee job satisfaction. *Journal of Leadership & Organizational Studies*, *19*, 152-163. doi:10.1177/1548051811431827
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, *9*, 139-145. doi:10.1017/S0033291700021644
- Gooty, J., Connelly, S., Griffith, J., & Gupta, A. (2010). Leadership, affect and emotions: A state of the science review. *The Leadership Quarterly*, *21*, 979-1004. doi:10.1016/j.leaqua.2010.10.005
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly*, *6*, 219-247. doi:10.1016/1048-9843(95)90036-5

- Grant, A. M., Christianson, M. K., & Price, R. H. (2007). Happiness, health, or relationships? Managerial practices and employee well-being tradeoffs. *Academy of Management Perspectives, 21*, 51-63. doi:10.5465/AMP.2007.26421238
- Greenaway, K. H., Haslam, S. A., Cruwys, T., Branscombe, N. R., Ysseldyk, R., & Heldreth, C. (2015). From “we” to “me”: Group identification enhances perceived personal control with consequences for health and well-being. *Journal of Personality and Social Psychology, 109*, 53. doi:10.1037/pspi0000019
- \*Güntert, S. (2015). The impact of work design, autonomy support, and strategy on employee outcomes: A differentiated perspective on self-determination at work. *Motivation & Emotion, 39*, 74-87. doi:10.1007/s11031-014-9412-7
- Guest, D. E. (2017). Human resource management and employee well-being: Towards a new analytic framework. *Human Resource Management Journal, 27*, 22-38. doi:10.1111/1748-8583.12139
- \*Gurt, J., Schwennen, C., & Elke, G. (2011). Health-specific leadership: Is there an association between leader consideration for the health of employees and their strain and well-being? *Work & Stress, 25*, 108-127. doi:10.1080/02678373.2011.595947
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior & Human Performance, 16*, 250-279. doi:10.1016/0030-5073(76)90016-7
- Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology, 91*, 1134-1145. doi:10.1037/0021-9010.91.5.1134
- Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR”: Understanding the role of resources in conservation of

resources theory. *Journal of Management*, 40, 1334-1364.

doi:10.1177/0149206314527130

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

\*Hansen, A., Byrne, Z., & Kiersch, C. (2014). How interpersonal leadership relates to employee engagement. *Journal of Managerial Psychology*, 29, 953-972.

doi:10.1108/JMP-11-2012-0343

Harman, H. H. (1967). *Modern Factor Analysis*. Chicago, IL: University of Chicago Press.

Harms, P. D., Credé, M., Tynan, M., Leon, M., & Jeung, W. (2017). Leadership and stress: A meta-analytic review. *The Leadership Quarterly*, 28, 178-194.

doi:10.1016/j.leaqua.2016.10.006

\*Hartline, M. D., & Ferrell, O. C. (1996). The management of customer-contact service employees: An empirical investigation. *Journal of Marketing*, 60(4), 52-70.

doi:10.2307/1251901

\*Hentrich, S., Zimmer, A., Garbade, S. F., Gregersen, S., Nienhaus, A., & Petermann, F.

(2017). Relationships between transformational leadership and health: The mediating role of perceived job demands and occupational self-efficacy. *International Journal of Stress Management*, 24, 34-61. doi:10.1037/str0000027

\*Hetland, J., Hetland, H., Bakker, A. B., Demerouti, E., Andreassen, C. S., & Pallesen, S.

(2015). Psychological need fulfillment as a mediator of the relationship between transformational leadership and positive job attitudes. *Career Development International*, 20, 464-481. doi:10.1108/CDI-10-2014-0136

\*Hildenbrand, K., Sacramento, C. A., & Binnewies, C. (2016). Transformational leadership and burnout: The role of thriving and followers' openness to experience. *Journal of*



*Occupational Health Psychology*. Advance online publication.

doi:10.1037/ocp0000051

Hiller, N. J., DeChurch, L. A., Murase, T., & Doty, D. (2011). Searching for outcomes of leadership: A 25-year review. *Journal of Management*, *37*, 1137-1177.

doi:10.1177/0149206310393520

Hobfoll, S. E. (1985). Limitations of social support in the stress process. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research and applications* (pp. 391-414). Dordrecht, Netherlands: Martinus Nijhoff.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress.

*American Psychologist*, *44*, 513-524. doi:10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory. *Applied Psychology*, *50*, 337-

421. doi:10.1111/1464-0597.00062

\*Hobman, E. V., Jackson, C. J., Jimmieson, N. L., & Martin, R. (2011). The effects of transformational leadership behaviours on follower outcomes: An identity-based analysis. *European Journal of Work & Organizational Psychology*, *20*, 553-580.

doi:10.1080/1359432X.2010.490046

\*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*, 269-288. doi:10.1177/1742715013476083

House, J. S. (1981). *Work stress and social support*. Reading, MA: Addison-Wesley.

Huppert, F. A., & Whittington, J. E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of*

*Health Psychology*, *8*, 107-122. DOI: 10.1348/135910703762879246

Judge, T. A., Bono, J. E., Thoresen, C. J., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, *127*, 376-407. doi:10.1037//0033-2909.127.3.376

\*Kampa, J., Rigotti, T., & Otto, K. (2017). Mechanisms linking authentic leadership to emotional exhaustion: The role of procedural justice and emotional demands in a moderated mediation approach. *Industrial Health*, *55*, 95–107.

doi:10.2486/indhealth.2016-0046

Kanungo, R. N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, *67*, 341-349. doi:10.1037/0021-9010.67.3.341

\*Kara, D., Uysal, M., Sirgy, M. J., & Lee, G. (2013). The effects of leadership style on employee well-being in hospitality. *International Journal of Hospitality Management*, *34*, 9-18. doi:10.1016/j.ijhm.2013.02.001

\*Kelloway, E. K., Turner, N., Barling, J., & Loughlin, C. (2012). Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership. *Work & Stress*, *26*, 39-55. doi:10.1080/02678373.2012.660774

\*Kiersch, C. E., & Byrne, Z. S. (2015). Is being authentic being fair? Multilevel examination of authentic leadership, justice, and employee outcomes. *Journal of Leadership & Organizational Studies*, *22*, 292-303. doi:10.1177/1548051815570035

\*Koch, A. R., & Binnewies, C. (2015). Setting a good example: supervisors as work-life-friendly role models within the context of boundary management. *Journal Of Occupational Health Psychology*, *20*, 82-92. doi:10.1037/a0037890

\*Kohles, J. C., Bligh, M. C., & Carsten, M. K. (2012). A follower-centric approach to the vision integration process. *The Leadership Quarterly*, *23*, 476-487.

doi:10.1016/j.leaqua.2011.12.002

- \*Konczak, L. J., Stelly, D. J., & Trusty, M. L. (2000). Defining and measuring empowering leader behaviors: Development of an upward feedback instrument. *Educational and Psychological Measurement, 60*, 301-313. doi:10.1177/00131640021970420
- \*Kong, H. (2013). Relationships among work-family supportive supervisors, career competencies, and job involvement. *International Journal of Hospitality Management, 33*, 304-309. doi:10.1016/j.ijhm.2012.09.006
- \*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*, 1031-1052. doi:10.1002/job.1771
- Kuoppala, J., Lamminpää, A., Liira, J., & Vainio, H. (2008). Leadership, job well-being, and health effects: A systematic review and a meta-analysis. *Journal Of Occupational and Environmental Medicine, 50*, 904-915. doi:10.1097/JOM.0b013e31817e918d
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist, 46*, 352-367. doi:10.1037/0003-066X.46.4.352
- Linley, P. A., & Joseph, S. (2007). Therapy work and therapists' positive and negative well-being. *Journal of Social and Clinical Psychology, 26*, 385-403. DOI: 10.1521/jscp.2007.26.3.385
- \*Li, Y., Xu, J., Tu, Y., & Lu, X. (2014). Ethical leadership and subordinates' occupational well-being: A multi-level examination in China. *Social Indicators Research, 116*, 823-842. doi:10.1007/s11205-013-0321-z
- \*Lian, H., Brown, D. J., Tanzer, N. K., & Che, H. (2011). Distal charismatic leadership and follower effects: An examination of Conger and Kanungo's conceptualization of charisma in China. *Leadership, 7*, 251-273. doi:10.1177/1742715011407386

- \*Liao, C., Wayne, S. J., Liden, R. C., & Meuser, J. D. (2016). Idiosyncratic deals and individual effectiveness: The moderating role of leader-member exchange differentiation. *The Leadership Quarterly*, 28, 438–450.  
doi:10.1016/j.leaqua.2016.10.014
- \*Liu, J., Siu, O.-L., & Shi, K. (2010). Transformational leadership and employee well-being: The mediating role of trust in the leader and self-efficacy. *Applied Psychology: An International Review*, 59, 454-479. doi:10.1111/j.1464-0597.2009.00407.x
- Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57(9), 705.  
doi:10.1037/0003-066X.57.9.705
- Lord, R.G. & Brown, D.J. (2001). Leadership, values and subordinate self-concepts. *The Leadership Quarterly*, 12, 133-152. doi.org/10.1016/S1048-9843(01)00072-8
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20, 709-734.  
doi:10.2307/258792
- McAllister, D. J. (1995). Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38, 24–59.  
doi:10.2307/256727
- Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth, H. Thierry & C. J. de Wolff (Eds.), *Handbook of work and organizational psychology - Volume 2: Work psychology* (2nd ed., pp. 5-33). Hove, United Kingdom: Psychology Press.
- \*Milner, K., Greyling, M., Goetzel, R., Da Silva, R., Kolbe-Alexander, T., Patel, D., . . . Beckowski, M. (2015). The relationship between leadership support, workplace health

- promotion and employee wellbeing in South Africa. *Health Promotion International*, 30, 514-522. doi:10.1093/heapro/dat064
- Mohr, G., Rigotti, T., & Müller, A. (2009). *Irritation Scale for the assessment of work-related strain*. Oxford, United Kingdom: Hogrefe.
- Montano, D., Reeske, A., Franke, F., & Hüffmeier, J. (2017). Leadership, followers' mental health and job performance in organizations: A comprehensive meta-analysis from an occupational health perspective. *Journal of Organizational Behavior*, 38, 327-350. doi:10.1002/job.2124
- \*Moyle, P. (1998). Longitudinal influences of managerial support on employee well-being. *Work & Stress*, 12, 29-49. doi:10.1080/02678379808256847
- \*Mozumder, N. A. (2016). A multilevel trust-based model of ethical public leadership. *Journal of Business Ethics*, Online advance. doi:10.1007/s10551-016-3341-1
- \*Mulki, J. P., Jaramillo, F., & Locander, W. B. (2006). Emotional exhaustion and organizational deviance: Can the right job and a leader's style make a difference? *Journal of Business Research*, 59, 1222-1230. doi:10.1016/j.jbusres.2006.09.001
- \*Munir, F., & Nielsen, K. (2009). Does self-efficacy mediate the relationship between transformational leadership behaviours and healthcare workers' sleep quality? A longitudinal study. *Journal of Advanced Nursing*, 65, 1833-1843. doi:10.1111/j.1365-2648.2009.05039.x
- \*Munir, F., Nielsen, K., Garde, A. H., Albertsen, K., & Carneiro, I. G. (2012). Mediating the effects of work–life conflict between transformational leadership and health-care workers' job satisfaction and psychological wellbeing. *Journal of Nursing Management*, 20, 512-521. doi:10.1111/j.1365-2834.2011.01308.x
- \*Namasivayam, K., Guchait, P., & Lei, P. (2014). The influence of leader empowering behaviors and employee psychological empowerment on customer satisfaction.

*International Journal of Contemporary Hospitality Management*, 26, 69-84.

doi:10.1108/IJCHM-11-2012-0218

Neider, L. L., & Schriesheim, C. A. (2011). The authentic leadership inventory (ALI):

Development and empirical tests. *The Leadership Quarterly*, 22, 1146-1164.

doi:10.1016/j.leaqua.2011.09.008

\*Nemanich, L. A., & Keller, R. T. (2007). Transformational leadership in an acquisition: A

field study of employees. *The Leadership Quarterly*, 18, 49-68.

doi:10.1016/j.leaqua.2006.11.003

\*Nielsen, K., & Daniels, K. (2012). Does shared and differentiated transformational

leadership predict followers' working conditions and well-being? *The Leadership*

*Quarterly*, 23, 383-397. doi:10.1016/j.leaqua.2011.09.001

Nielsen, K., & Daniels, K. (2016). The relationship between transformational leadership and

follower sickness absence: the role of presenteeism. *Work & Stress*, 30, 193-208.

doi:10.1080/02678373.2016.1170736

\*Nielsen, K., & Munir, F. (2009). How do transformational leaders influence followers'

affective well-being? Exploring the mediating role of self-efficacy. *Work & Stress*,

23, 313-329. doi:10.1080/02678370903385106

\*Nielsen, K., Randall, R., Yarker, J., & Brenner, S.-O. (2008). The effects of

transformational leadership on followers' perceived work characteristics and

psychological well-being: A longitudinal study. *Work & Stress*, 22, 16-32.

doi:10.1080/02678370801979430

\*Nielsen, K., Yarker, J., Brenner, S.-O., Randall, R., & Borg, V. (2008). The importance of

transformational leadership style for the well-being of employees working with older

people. *Journal of Advanced Nursing*, 63, 465-475. doi:10.1111/j.1365-

2648.2008.04701.x

- \*Nielsen, K., Yarker, J., Randall, R., & Munir, F. (2009). The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: A cross-sectional questionnaire survey. *International Journal of Nursing Studies*, *46*, 1236-1244. doi:10.1016/j.ijnurstu.2009.03.001
- \*Paterson, T. A., Luthans, F., & Jeung, W. (2014). Thriving at work: Impact of psychological capital and supervisor support. *Journal of Organizational Behavior*, *35*, 434-446. doi:10.1002/job.1907
- Piccolo, R. F., Bono, J. E., Heinitz, K., Rowold, J., Duehr, E., & Judge, T. A. (2012). The relative impact of complementary leader behaviors: Which matter most? *The Leadership Quarterly*, *23*, 567-581. doi:10.1016/j.leaqua.2011.12.008
- \*Pillai, R., Schriesheim, C. A., & Williams, E. S. (1999). Fairness perceptions and trust as mediators for transformational and transactional leadership: A two-sample study. *Journal of Management*, *25*, 897-933. doi:10.1177/014920639902500606
- Podsakoff, P. M., MacKenzie, S. B., Jeong-Yeon, L., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*, 879-903. doi:10.1037/0021-9010.88.5.879
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*, 539-569. doi:10.1146/annurev-psych-120710-100452
- \*Prottas, D. (2013). Relationships among employee perception of their manager's behavioral integrity, moral distress, and employee attitudes and well-being. *Journal of Business Ethics*, *113*, 51-60. doi:10.1007/s10551-012-1280-z

- \*Rahimnia, F., & Sharifirad, M. (2015). Authentic leadership and employee well-being: The mediating role of attachment insecurity. *Journal of Business Ethics, 132*, 363-377.  
doi:10.1007/s10551-014-2318-1
- Roe, R. A., Gockel, C., & Meyer, B. (2012). Time and change in teams: Where we are and where we are moving. *European Journal of Work and Organizational Psychology, 21*, 629-656. doi:10.1080/1359432X.2012.729821
- Roe, R. A., & Inceoglu, I. (2016). Measuring states and traits in motivation and emotion: A new model illustrated for the case of work engagement. In D. Bartram, F. Cheung, K. Geisinger, J. Hattie, D. Ilescu & F. Leong (Eds.), *ITC International Handbook of Testing and Assessment* (pp. 63-88). New York, NY: Oxford University Press.
- \*Rooney, J. A., Gottlieb, B. H., & Newby-Clark, I. R. (2009). How support-related managerial behaviors influence employees: An integrated model. *Journal of Managerial Psychology, 24*, 410-427. doi:10.1108/02683940910959744
- Rubin, D. B. (2008). For Objective Causal Inference, Design Trumps Analysis. *Annals of Applied Statistics, 2*(3), 808-840.
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative Science Quarterly, 23*, 224-253.  
doi:10.2307/2392563
- Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology, 51*, 1257-1264. doi:10.1037/0022-3514.51.6.1257
- Selig, J. P., & Little, T. D. (2012). Autoregressive and cross-lagged panel analysis for longitudinal data. In B. Laursen, T. D. Little, & N. A. Card (Eds.), *Handbook of developmental research methods* (pp. 265-278). New York: Guilford Press



- 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.  
doi:10.1080/02678373.2010.495262
- \*Sluss, D. M., & Thompson, B. S. (2012). Socializing the newcomer: The mediating role of leader–member exchange. *Organizational Behavior & Human Decision Processes, 119*, 114-125. doi:10.1016/j.obhdp.2012.05.005
- Solomon, M. J. (1981). Dimensions of interpersonal behavior: A convergent validation within a cognitive interactionist framework. *Journal of Personality, 49*, 15-26.  
doi:10.1111/j.1467-6494.1981.tb00843.x
- \*Sparr, J. L., & Sonnentag, S. (2008a). Fairness perceptions of supervisor feedback, LMX, and employee well-being at work. *European Journal of Work & Organizational Psychology, 17*, 198-225. doi:10.1080/13594320701743590
- \*Sparr, J. L., & Sonnentag, S. (2008b). Feedback environment and well-being at work: The mediating role of personal control and feelings of helplessness. *European Journal of Work & Organizational Psychology, 17*, 388-412. doi:10.1080/13594320802077146
- Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal, 39*, 483-504. doi:10.2307/256789
- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science, 16*, 537-549.  
doi:10.1287/orsc.1050.0153
- Stajkovic, A. D. (2006). Development of a core confidence-higher order construct. *Journal of Applied Psychology, 91*, 1208-1224. doi:10.1037/0021-9010.91.6.1208

- Steffens, N.K., Haslam, S.A., Schuh, S.C., Jetten, J., & Van Dick, R. (2017). A meta-analytic review of social identification and health in organizational contexts. *Personality and Social Psychology Review*, 21, 303-335 doi.org/10.1177/1088868316656701
- Stone-Romero, E. F. (2008). The relative validity and usefulness of various empirical research designs. In S. G. Rogelberg (Ed.), *Handbook of Research Methods in Industrial and Organizational Psychology* (pp. 77-98). Malden, MA: Blackwell.
- \*Sung Min, P., & Rainey, H. G. (2008). Leadership and public service motivation in U.S. federal agencies. *International Public Management Journal*, 11, 109-142.  
doi:10.1080/10967490801887954
- Syrek, C. J., & Antoni, C. H. (2014). Unfinished tasks foster rumination and impair sleeping - Particularly if leaders have high performance expectations. *Journal of Occupational Health Psychology*, 19, 490-499. doi:10.1037/a0037127
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago, IL: Nelson-Hall.
- \*Tafvelin, S., Armelius, K., & Westerberg, K. (2011). Toward understanding the direct and indirect effects of transformational leadership on well-being: A longitudinal study. *Journal of Leadership & Organizational Studies*, 18, 480-492.  
doi:10.1177/1548051811418342
- ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work-home interface: The work-home resources model. *American Psychologist*, 67, 545-556.  
doi:10.1037/a0027974
- \*Tuckey, M. R., Bakker, A. B., & Dollard, M. F. (2012). Empowering leaders optimize working conditions for engagement: A multilevel study. *Journal of Occupational Health Psychology*, 17, 15-27. doi:10.1037/a0025942

- van Kleef, G. A., Homan, A. C., Beersma, B., Van Knippenberg, D., Van Knippenberg, B., & Damen, F. (2009). Searing sentiment or cold calculation? The effects of leader emotional displays on team performance depend on follower epistemic motivation. *Academy of Management Journal*, *52*, 562-580. doi:10.5465/AMJ.2009.41331253
- 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. doi:10.1080/19416520.2013.759433
- \*Vermeeren, B., Kuipers, B., & Steijn, B. (2014). Does leadership style make a difference? Linking HRM, job satisfaction, and organizational performance. *Review of Public Personnel Administration*, *34*, 174-195. doi:10.1177/0734371X13510853
- \*Vlachos, P. A., Panagopoulos, N. G., & Rapp, A. A. (2013). Feeling good by doing good: Employee CSR-induced attributions, job satisfaction, and the role of charismatic leadership. *Journal of Business Ethics*, *118*, 577-588. doi:10.1007/s10551-012-1590-1
- \*Walumbwa, F. O., Wang, P., Lawler, J. J., & Kan, S. (2004). The role of collective efficacy in the relations between transformational leadership and work outcomes. *Journal of Occupational & Organizational Psychology*, *77*, 515-530. doi:10.1348/0963179042596441
- Warr, P. (2013). How to think about and measure psychological well-being. In R. R. Sinclair, M. Wang, L. E. Tetrick, R. R. Sinclair, M. Wang & L. E. Tetrick (Eds.), *Research methods in occupational health psychology: Measurement, design, and data analysis* (pp. 76-90). New York, NY: Routledge.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070. doi:10.1037/0022-3514.54.6.1063

- Wegge, J., Shemla, S., & Haslam, A. (2014). Leader behavior as a determinant of health at work: specification and evidence of five key pathways. *German Journal of Human Resource Management*, 28, 6 – 23. DOI: 10.1177/239700221402800102
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw, L. L. Cummings, B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (Vol. 18, pp. 1-74). Greenwich, CT: Elsevier.
- Yukl, G. A. (2013). *Leadership in organizations* (8th ed.). Boston, MA: Pearson.
- Yukl, G., Gordon, A., & Taber, T. (2002). A hierarchical taxonomy of leadership behavior: Integrating a half century of behavior research. *Journal of Leadership & Organizational Studies*, 9, 15-32. doi:10.1177/107179190200900102
- Zhang, Y., Waldman, D. A., Han, Y. L., & Li, X. B. (2015). Paradoxical leader behaviors in people management: Antecedents and consequences. *Academy of Management Journal*, 58, 538-566. doi:10.5465/amj.2012.0995
- \*Zhu, Y., & Akhtar, S. (2014). The mediating effects of cognition-based trust and affect-based trust in transformational leadership's dual processes: Evidence from China. *The International Journal of Human Resource Management*, 25, 2755-2771. doi:10.1080/09585192.2014.934885

**Footnotes**

<sup>1</sup>We decided to use the term “negative well-being” in this paper as it appears to be the most commonly used term in the clinical, health and organizational psychology literature (e.g., Huppert & Whittington, 2003; Linley & Joseph, 2007) and it also consistent with the philosophical origins of well-being as a construct (e.g., Plato).

<sup>2</sup>We reviewed items of leadership behavior scales that did not clearly fit into the Derue et al. (2011) categories. If these were defined as a distinct leadership behavior of their own (e.g., ethical leadership) we classified these as ‘other’ and considered these leadership behaviors separately in the review. (p. 8)

Figure 1. Conceptual model and overview of examined leadership behaviors, mediators and forms of employee well-being in the reviewed papers.

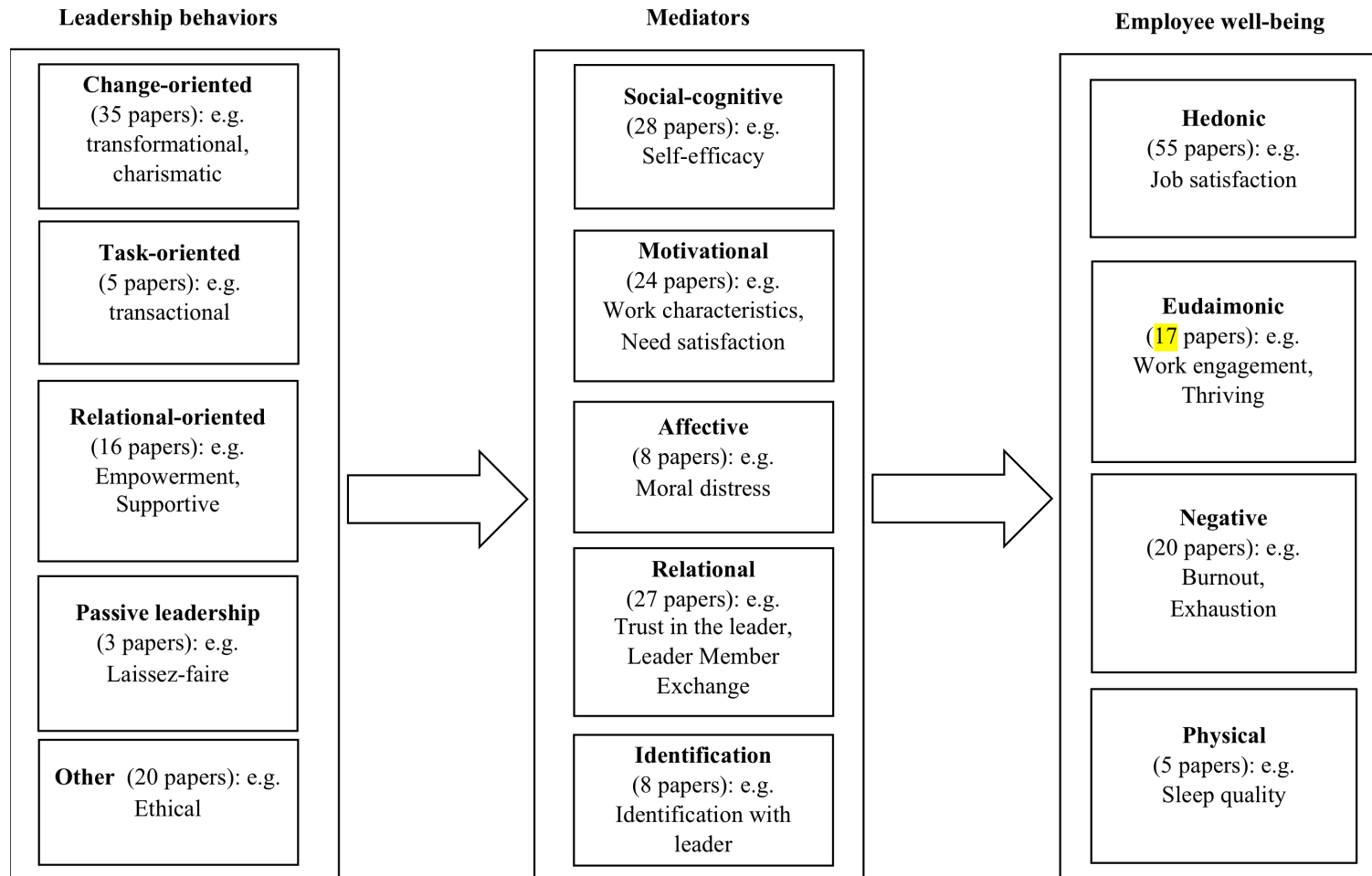


Table 1

*Overview of mediator groupings*

Mediator grouping	Theoretical grounding	Example constructs
(a) Social-cognitive	Social learning theory (Bandura, 1977), psychological empowerment (Conger & Kanungo, 1988), social signaling theory (Salancik & Pfeffer, 1978), confidence related (e.g., Stajkovic, 2006), procedural and distributive justice perceptions (Colquitt, 2001)	Self-efficacy, followers' perceived knowledge, skills and abilities, vision integration, fit with culture and strategy of organization, psychological empowerment
(b) Motivational	Job design (Hackman & Oldham, 1976), Self-determination theory and behavior regulation (Deci & Ryan, 2000), Goal-setting (Locke & Latham, 2002)	Job control, meaningful work, role overload, role conflict, role ambiguity, task variability, fulfillment of basic psychological needs
(c) Affective	Affective Events Theory (Weiss & Cropanzano, 1996), mood as information model (George & Zhou, 2007, van Kleef et al., 2009), affect and well-being as resources (COR theory, e.g., Hobfoll, 1989)	Leaders' affect, followers' affect (e.g., employee amplification of pleasant emotions), followers' well-being (e.g., work engagement, thriving, emotional exhaustion)
(d) Relational	Social exchange and related theories (Blau, 1964; Graen & Uhl-Bien, 1995), perceptions of interpersonal justice (Colquitt, 2001)	Trust, LMX, interactional justice perceptions, followers' attachment styles, psychological climate, cohesion, supervisor social support, workplace bullying
(e) Identification	Social identity theory (Tajfel & Turner, 1986); job identity (Kanungo, 1982)	Organizational identification, personal identification with the leader, group identification, job involvement