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Review

A systematic review and critique of research on "healthy leadership"

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ABSTRACT

Employee health and wellbeing are important concerns for organizations, and it has long been known that social support from leaders has a salutogenic influence on their followers. Over the past decade, several models of "healthy leadership" have been introduced, with the aim of theoretically integrating leadership research with scholarship on occupational health and wellbeing. We present a systematic review and critique of the literature on these models of "healthy leadership" and associated evidence from empirical studies ($k = 35$). In addition, we compare various models of "healthy leadership" and critically evaluate evidence for their incremental predictive validity above and beyond established leadership constructs (e.g., individualized consideration). We conclude with a discussion of problems in the "healthy leadership" literature (e.g., construct proliferation, confounding of leader behavior and its desired outcomes) and outline a "new agenda" of prescriptive recommendations for "healthy leadership" theory (re)development, research, and practice.

Introduction

Ensuring high levels of employee health and wellbeing is an important concern for organizations. Healthier employees perform work tasks more efficiently (Wright & Cropanzano, 2000), are less likely to quit their jobs (Kramer & Son, 2016), are more likely to perform extra-role behaviors (Ford, Cerasoli, Higgins, & Decesare, 2011), and are more satisfied with their jobs (Faragher, Cass, & Cooper, 2013). Additionally, it has long been known that social support has a salutogenic influence on health and wellbeing (Halbesleben, 2006; Viswesvaran, Sanchez, & Fisher, 1999), and this especially includes social support from leaders (e.g., positive leader-member relations, see Harms, Credé, Tynan, Leon, & Jeung, 2017; Kuoppala, Lamminpää, Liira, & Vainio, 2008; Montano, Reeske, Franke, & Hüffmeier, 2017). Until recently, however, there have not been explicit theoretical models and empirical studies that posit the influence of "healthy leadership" attitudes, values, and behaviors on employee health and wellbeing.

To account for the health-specific influence of leaders on employee health and wellbeing, scholars have introduced various models of "healthy leadership" over the past decade (see Table 1). Health and wellbeing are typically understood here, and within the "healthy leadership" literature, to encompass physical, mental, and social wellbeing, and not just the absence of disease (WHO, 2006). We use the term "healthy leadership" broadly to refer to these health-related leadership models and associated constructs, including health- and wellbeing-specific leader attitudes (e.g., beliefs about the "value" of health), values (e.g., prioritizing employee health), and/or behaviors (e.g., communicating the importance of exercise or recovery).

In this article, we present a systematic review and critique of the literature on "healthy leadership." Although we review the entirety of this literature, we particularly focus on health-promoting and health-oriented leadership, as these concepts have received substantial attention, both empirically (see Table 2) and in terms of conceptual development (e.g., Böhm, Baumgärtner, & Kreissner, 2016; Spiess & Stadler, 2016). Until now, such an effort has not been undertaken, particularly one that contrasts these various models against one-another and critically evaluates evidence for their incremental predictive validity above and beyond established leadership constructs (see also Akerjordet, Furunes, & Haver, 2018).

Importantly, our review focuses specifically on "healthy leadership" models, and not on research that has considered associations between established leadership constructs (e.g., leader-member exchange [LMX], transformational leadership) and employee health and wellbeing (for reviews and meta-analyses, see Harms et al., 2017; Kuoppala et al., 2008; Montano et al., 2017). We also do not consider relationships between established leadership constructs and leader health and wellbeing (for a meta-analysis, see Kaluza, Boer, Buengeler, & van Dick, 2019). However, to better understand the positioning of "healthy leadership" among these established leadership frameworks, we do draw conceptual parallels where relevant.

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Table 1
"Healthy leadership" constructs, definitions, and relevant citations.

Construct	Definition	Citation
Health-promoting leadership	"…creating a culture for health-promoting workplaces and values that inspire and motivate employees to participate in such a development." (p. 17)	Eriksson (2011)
Health-oriented leadership	Leader's values toward and awareness of their follower's health, and behaviors such as effective health-related communication and the design of health-promoting working conditions.	Franke and Felfe (2011)
Health- and development-promoting leadership	"…leaders' direct impact on the demands, task requirements and resources of their employees." (p. 42)	Vincent (2012a, 2012b)
Health-specific leadership	"Health-specific leadership is conceptualized as the leader's explicit consideration of and engagement in employee health." (p. 108)	Gurt et al. (2011)
Healthy leadership	"...a style of humane and relationship-oriented leading with focus on the subjective well-being of employees and managers" (p. 1)	Jiménez et al. (2013)
Leadership support for health promotion	"Business alignment with health promotion objectives, awareness of the health-productivity link, worksite support for health promotion, and leadership support for health promotion." (p. 359)	Della et al. (2008)
Organizational leadership for health promotion	"A multidimensional process in which members, across multiple levels, exert influence on: 1. The development of health promotion (HP) objectives and action strategies for the improvement of community health, 2. the implementation of action strategies to achieve community heart health objectives, 3. organizational practices that strengthen group involvement and commitment to ongoing HP efforts, and 4. the development of a learning culture that sustains up-to-date HP actions and effective community interaction by the organization." (pp. 197–198)	Barrett et al. (2005)
Salutogenic leadership	Leadership behavior that involves building trust, managing problems, and reducing work-related pressure faced by subordinates	Eberz and Antoni (2018)
Health-promoting managerial work	"...managers' evidence-based knowledge of health-promoting psychosocial work conditions, as well as their capability to apply, adapt, and craft sustainable managerial work practices." (p. 1)	Dellve and Eriksson (2017)
Health-promoting leadership conditions	"...the provision of feedback about the leaders' efforts to create health-promoting working conditions in seven key aspects: health awareness, workload, control, reward, community, fairness and value-fit" (p. 1)	Jiménez, Winkler, and Bregenzer (2017)
Individual leadership for health promotion	"...individual leadership behaviours as well as individuals' perceptions of different aspects of organizational leadership, but in relation to themselves only." (p. 4) Including: "individual actions characteristic of ongoing learning and reflection, and characteristic of leaders (i.e. reflective practices and professional development); and organizational practices and characteristics which foster individual leadership for health promotion (i.e. opportunity for change, skills and work conditions)." (p.4)	Anderson et al. (2005)
Health leadership	"Healthy leadership is usually understood as direct leadership behavior and less as a general controlling function of structural leadership. Thus, healthy leadership focusses on personal leadership, which is practiced and lived by executives - or not. Healthy leadership does not focus solely on employee leadership: Healthy leadership starts with one's own self in the form of self-management."	Möltner et al. (2016)
Health-focused leadership	Leader's behavior that protects, enhances and restores the health of employees.	Böhm and Baumgärtner (2016)

The central arguments and contributions we offer are three-fold. First, our review argues that because various "healthy leadership" models have emerged in parallel, there is a great deal of theoretical and empirical overlap between them to be noted and critically examined. This observation raises questions about the possibility of construct proliferation (Shaffer, DeGeest, & Li, 2016), and we suggest ways to address this issue in future research. Second, consistent with recent criticisms of the transformational leadership literature (see Van Knippenberg & Sitkin, 2013), we propose that research on "healthy leadership" confounds actual leadership behavior with its intended outcomes of employee health and wellbeing. Defining and measuring "healthy leadership" in terms of its beneficial effects on these outcomes is problematic, because it does not allow valid conclusions regarding the effectiveness of this form of leadership behavior. Finally, we question and critically examine whether theoretical and empirical research has sufficiently addressed the issue of the incremental validity (see Antonakis, 2017) of "healthy leadership" for predicting employee health and wellbeing.

To frame these arguments, our paper is organized around four specific and interrelated goals. First, we begin by introducing the background and potential importance of "healthy leadership," and by describing various "healthy leadership" constructs that can be found in the literature. Second, we further explore "healthy leadership" conceptualizations by comparing and contrasting common and unique predictions made by these various models. Third, we present a systematic and critical literature review of empirical (quantitative and qualitative) studies on "healthy leadership." Finally, we outline an integrative research agenda that offers prescriptive recommendations for "healthy leadership" theory development, future research, and practice.

Review of "healthy leadership" models and constructs

There is evidence that work environments are increasingly experienced as stressful by employees. For example, job demands have increased over time, particularly cognitive demands associated with knowledge jobs (National Academy of Sciences, 1999). To address this issue, organizations have dedicated quite a bit of attention toward systems that support employee health and wellbeing (e.g., Richardson, 2017; Tetrick & Winslow, 2015). Such systems can take many forms, from more tangible formal policies and benefits to less tangible forms of social support. One particularly important source of such support is one's immediate supervisor. The imperative of organizations and leaders to support their employees' health and wellbeing is a key component of their "duty of care." For employees, maintaining high levels of health and wellbeing is an important factor in their long-term employability (Berntson & Marklund, 2007).

Often citing the shortcomings of established leadership models with regard to these trends, "healthy leadership" models seek to add to our ability to explain and make predictions about how leaders influence the health and wellbeing of their followers. For example, Franke, Vincent, and Felfe (2011) motivate the development of their health-oriented leadership measure by suggesting that established models of leadership, such as transformational leadership, are "too vague about specific health-related actions of leaders" (p. 140). Next, we describe health-promoting and health-oriented leadership, two dominant "healthy leadership" concepts found in the literature. We additionally describe a number of related conceptualizations that appear less frequently in this literature, but that also address core themes of "healthy leadership." Table 1 summarizes these various "healthy leadership" constructs, their

Table 2
Summary of the $k = 35$ studies of "healthy leadership" included in the literature review.

Citation	Method	Design	Measure	Incremental?	Study context (country; industry)	Sample description (sample size; position description)	Relevant outcome(s)
				Health-promoting leadership			
Gurt and Elke (2009)	Quant	2-wave CP survey	OHSQ	No	Germany; Government	$n = 265$ tax administration employees	Follower strain
Törnblom (2012)	Quant	CS survey	HDPLA	Yes	Sweden; government	$n = 346$ county council employees	Follower self-reported health
Andersson and Dafteke (2014)	Quant	CS survey	CPQ	No	Sweden; healthcare	$n = 63$ healthcare employees	Follower self-reported health
Winkler et al. (2014)	Quant	CS survey	Ad-hoc	Yes	Germany; low-skilled industries	$n = 474$ foodservice and manufacturing employees; $n = 35$ leaders	Follower wellbeing, job satisfaction, emotional exhaustion, & psychosomatic complaints
Adler et al. (2017)	Quant	CS survey	Adapted	Yes	United States; military	$n = 344$ active duty and reserve U.S. service members deployed in Afghanistan	Follower burnout, PTSD symptoms, & perceived stressors
Jiménez and Dunkl (2015)	Quant	CS survey	HPLC	No	Study 1: unclear country, convenience sample; study 2: Austria, convenience sample	Study 1: $n = 430$, various positions; study 2: $n = 233$, various positions	Follower stress-related recovery & work engagement
Dunkl et al. (2015)	Quant	CS survey	HPLC	No	Slovenia; convenience sample	$n = 212$ employees; various positions	Follower perceived stress & recovery
Bregenzer et al. (2015)	Quant	2-wave IP survey	HPLC	No	Unclear country; convenience sample	$n = 98$ employees; various positions	Follower perceived stress, recovery, & burnout
Jiménez, Winkler, and Dunkl (2017)	Quant	CS survey	HPLC; HoL	No	Austria; government	$n = 299$ leaders from the Austrian economic chamber	Leader recovery, perceived stress, & burnout
Jiménez, Winkler, and Bregenzer (2017)	Quant	CS survey	HPLC; HoL	No	Austria; multiple industries and a convenience sample	$n = 430$ employees from commerce and education organizations, and others with no position description provided	Follower perceived stress, recovery, & burnout
Jiménez, Bregenzer, Kallus, et al. (2017)	Quant	CS survey	HPLC	No	Austria; convenience sample	Two samples ($n = 228$ employees; $n = 263$ employees); Various positions	Follower perceived stress, recovery, & burnout
Eriksson et al. (2010)	Qual	INT	N/A	No	Sweden; government	$n = 15$ municipal leaders	Leader plans to analyze sickness rates and work attendance
Juhlin (2012)	Qual	INT	N/A	No	Unclear country; unclear organizational sample	$n = 4$ leaders; No position description provided	Leader's recognition that their actions have health-related consequences for their followers
Winkler et al. (2013)	Qual	INT	N/A	No	Various countries; various low-skilled industries	$n = 53$ employees from low-skilled industries (e.g., cleaning staff; workers in a poultry production facility)	Follower's understanding of the connection between their leader's behavior and their own health
Pärlemyr (2017)	Qual	INT	N/A	No	Unclear country; service, manufacturing, and development industries	$n = 5$ private sector leaders	Leader's recognition that their actions have health-related consequences for their followers
Furunes et al. (2018)	Qual	INT	N/A	No	Unclear country; healthcare	$n = 12$ community homecare nurses	Follower's understanding of the connection between their leader's behavior and their own health
				Health-oriented leadership			
Franke and Felfe (2011)	Quant	2-wave IP survey	HoL	No	Unclear country; financial services, administration, education and health care industries	$n = 74$ leaders and $n = 459$ followers; no position description provided	Follower irritation & somatic complaints
Franke et al. (2014)	Quant	2-wave IP survey	HoL	Yes	Study 1: Germany, various industries; study 2: Germany, various industries	Study 1: $n = 535$, no position description provided; study 2: $n = 383$, no position description provided	Follower health status, irritation, & health complaints
Kranabetter and Niessen (2017)	Quant	CS survey	HoL	Yes	Unclear country; financial & healthcare industries	$n = 87$ leaders and $n = 453$ followers from two organizations; no position description provided	Follower exhaustion & cynicism
Santa Maria et al. (2018)	Quant	CS survey	HoL	No	Germany; public safety	$n = 811$ police officers	Follower physical complaints, burnout, depression, & wellbeing
Köppe et al. (2018)	Quant	2-wave IP survey	HoL	No	Germany; convenience sample	$n = 106$ leaders and followers; various positions	Follower somatic health complaints
Kranabetter and Niessen (2016)	Qual	INT	N/A	No	Unclear country; convenience sample	$n = 50$ leaders; various positions	Follower exhaustion
				Health- and development-promoting leadership			
Vincent (2011)	Quant	CS survey	HDPLA	Yes	Unclear country; convenience sample	$n = 1278$ employees; various positions	Follower irritation, emotional exhaustion, psychosomatic complaints, & work ability

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Table 2 (*continued*)

Citation	Method	Design	Measure	Incremental?	Study context (country; industry)	Sample description (sample size; position description)	Relevant outcome(s)
Vincent (2012a)	Quant	CS survey	HDPLA	No	Germany; convenience sample	n = 1322 followers; various positions	Follower work engagement, irritation, & emotional exhaustion
Vincent (2012b)	Quant	CS survey	HDPLA	Yes	Germany; convenience sample	n = 822; various positions	Follower irritation, emotional exhaustion, & psychosomatic health complaints
Rigotti et al. (2014)	Quant	2-wave IP survey	HDPLA	Yes	Germany, Sweden, & Finland; various industries	Study 1: n = 119 followers, various positions; study 2: n = 131 leaders and n = 1006 followers, various positions	Follower wellbeing, job satisfaction, emotional exhaustion, & psychosomatic complaints
					Additional "healthy leadership" models		
Gurt et al. (2011)	Quant	CS survey	OHSQ	No	Germany; government	n = 1027 tax administration employees	Follower job satisfaction & strain
Horstmann (2018)	Quant	CS survey	HoL	Yes	Study 1: Germany, healthcare; study 2: Germany, healthcare	Study 1: n = 861 employees of geriatric nursing homes; study 2: n = 524 employees of geriatric nursing homes	Follower health complaints & burnout
Möltner et al. (2016)	Quant	CS survey	HoL	No	Unclear country; convenience sample	n = 211 leaders; various positions	Leader mindfulness & positive health cultures
Milner et al. (2013)	Quant	CS survey	LBE	No	South Africa; various industries	n = 11,472 employees; various positions	Follower stress-related recovery & work engagement
Hoert (2014)	Quant	CS survey	LBE	No	United States; financial service, higher education, & retail	n = 621; various positions	Follower job satisfaction, job stress, employee engagement, health-related behaviors, & participation in wellness programs
Barrett et al. (2007)	Quant	CS survey	OLHP	No	Canada; healthcare	n = 158; various positions	Follower physiological, behavioral, and psychosocial risk factors, environmental conditions, nutrition, tobacco reduction, & physical activity
Axewill (2013)	Qual	INT	N/A	No	Unclear country; primary education	n = 6 preschool managers	Follower attendance rates
Eberz and Antoni (2018)	Quant	CS survey	TIMP	Yes	Unclear country; criminal justice & human services	Two samples: n = 333 & n = 384; various positions	Follower sense of coherence
Dellve and Eriksson (2017)	Mixed	INT & CS survey	N/A	No	Unclear country; healthcare	n = 64 leaders; various positions	Follower job satisfaction & vitality

Note. Quant = quantitative; Qual = qualitative; Mixed = mixed methods; CP = complete panel; IP = incomplete panel; CS = cross sectional; INT = interview; Measure = measure of "healthy leadership"; Incremental = Does study provide evidence for incremental validity?; HDPLA = Health and Development Promoting Leadership Analysis (Vincent, 2010, 2012a, 2012b); HoL = Health Oriented Leadership Scale (Franke et al., 2014; Franke & Felfe, 2011); OHSQ = Organizational Health and Safety Questionnaire (Gurt et al., 2010); CPQ = Copenhagen Psychosocial Questionnaire (Kristensen, Hannerz, Hogh, & Borg, 2005); HPLC = Health-Promoting Leadership Conditions (Jiménez & Dunkl, 2015); LBE = Leading by Example (Della et al., 2008); OLHP = Organizational Leadership for Health Promotion (Barrett et al., 2005); TIMP = Trust, Incident Management and Pressure Inventory (Eberz & Antoni, 2018); Ad-Hoc = ad-hoc battery of measures, created for this study (i.e., which do not readily map onto other "healthy leadership" measures considered here); Adapted = adapted measure (i.e., which does not readily map onto other "healthy leadership" measures considered here).

Table 3
Summary of various "healthy leadership" measures considered in our literature review.

Measure	Citation(s)	Construct(s)	Description & relevant example item(s)	Validity	Reliability	Dimensionality	Perspective
Copenhagen Psychosocial Questionnaire (CPQ)	Kristensen et al. (2005)	Health promoting leadership	A measure comprised of 30 different sub-scales assessing features of the psychosocial work environment, including "quality of leadership" *Example item* - quality of leadership: "To what extent would you say that your immediate superior is good at work planning?"	Correlations among CPQ sub-scales are provided; no external criteria are considered	Internal Consistency (α = 0.61 to 0.93)	Factor analytic evidence suggests overlap between certain sub-scales and measures of functional health	Follower Reports
Health and development promoting leadership Analysis (HDPLA)	Vincent (2010) Vincent (2012a, 2012b)	Health and development promoting leadership Health promoting leadership	Measure designed to assess three underlying higher-order dimensions of health and development promoting leadership (i.e., demanding, development-oriented and support-oriented leadership) *Example item* - clarity: "My leader takes care of clear task assignments and responsibilities" *Example item* - feedback: "My leader gives me regular feedback on my work results"	Evidence for convergent/divergent and criterion-related validity are provided in the form of zero-order correlations and multiple regression models	Internal Consistency (α = 0.77 to 0.92)	Factor analytic evidence supports the three-factor dimensionality of this index	Follower Reports
Health oriented leadership scale (HoL)	Franke and Felfe (2011) Franke et al. (2014) Franke et al. (2015)	Health oriented leadership Health promoting leadership Health specific leadership Healthy leadership	Measures designed to capture three dimensions of health oriented leadership (i.e., awareness, value, and behaviors) in terms of both "self care" and "staff care" *Example item* - leader "self care": "I notice immediately if something is wrong with my health" *Example item* - leader "staff care": "I notice immediately when something is wrong with my employees" *Example item* - follower perceived "staff care": "My supervisor will know immediately if something is wrong with me"	Correlations between HoL and external measures of job characteristics criteria (e.g., task content) are reported	Internal Consistency (α = 0.68 to 0.88)	Factor analytic evidence supports the six-factor dimensionality of this index	Leader & follower reports
Health-promoting leadership conditions (HPLC)	Jiménez & Dunkl et al. (2015)	Health promoting leadership	A measure designed to capture health promoting leadership strategies that support healthy working conditions *Example item* - health awareness: "As a leader I take care that the health of all employees is promoted"	Correlations between HPLC and external measures of stress and recovery are reported	No reliability information provided	No factor analytic evidence provided	Follower Reports
Leading by example (LBE)	Della et al. (2008)	Leadership support for health promotion	A measure designed to assess dimensions of management support for worksite health promotion *Example item*: "Our leaders view the level of employee health and wellbeing as one important indicator of the site's business success"	Content validity assessed via SMEs	Internal consistency (α = 0.61 to 0.82)	Factor analytic evidence supports the four-factor dimensionality of this index	Follower reports
Organizational Health and Safety Questionnaire (OHSQ)	Gurt et al. (2010)	Health promoting leadership Health specific leadership	A measure designed to assess general healthy leadership behaviors and the engagement in health promotion of the leader. *Example item* - task related: "My supervisor routinely discusses with me which objectives are to be accomplished concerning workplace health promotion") *Example item* - relationship related: "My	Correlations between OHSQ external measures of irritation, complaints, and job satisfaction are reported	Internal Consistency (α = 0.32 to 0.88); test-retest (rxy = 0.38 to 0.92)	No factor analytic evidence provided	Leader & Follower reports

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Table 3 (*continued*)

Measure	Citation(s)	Construct(s)	Description & relevant example item(s)	Validity	Reliability	Dimensionality	Perspective
			supervisor assumes responsibility for my health"				
Organizational Leadership for Health Promotion (OLHP)	Barrett et al. (2005)	Organizational leadership for health promotion	A measure designed to assess four dimensions of organizational leadership for health promotion (i.e., practices for organizational learning, wellness planning, workplace milieu, and organizational member development) *Example item* - wellness planning: "Policies, programs, and budgets reflect the values and principles of the wellness model"	Content validity assessed via SMEs	Internal consistency (α = 0.79 to 0.91)	Dimensionality explored through principal components analysis	Follower reports
Trust, Incident Management and Pressure Inventory (TIMP)	Eberz and Antoni (2018)	Salutogenic leadership	A measure designed to assess three dimensions of salutogenic leadership (i.e., trust, incident management and pressure) *Example item* - trust: "My direct supervisor leaves a great deal of room for decision-making and design"	Evidence for convergent/divergent and criterion-related validity are provided in the form of zero-order correlations and multiple regression models	Internal Consistency (α = 0.72 to 0.90)	Factor analytic evidence supports the three-factor dimensionality of this index	Follower Reports

Note. Although other measures of "healthy leadership" exist (e.g., Anderson et al., 2005), this table summarizes those used in studies included in our review. Citation(s) = citation(s) associated with initial scale development. Construct(s) = constructs operationalized by scales in reviewed studies. Validity = evidence offered for validity, Reliability = evidence offered for reliability, Dimensionality = evidence offered for dimensionality, Perspective = measure taken from leader- or follower-reported perspective. All scales were originally designed purposefully as measures of "healthy leadership," with the exception of the CPQ.

definitions, and relevant citations. We trace the development of these models and constructs and critically discuss attempts to quantify them via the development of measurement instruments (see Table 3).

Health-promoting leadership

Much of the early work on "healthy leadership" emerged from the public health and health-promotion literatures from Scandinavian/Nordic Countries. An early conceptualization termed *health-promoting leadership* is attributed to Hanson (2004), who identified three core dimensions: personal leadership (i.e., leaders' provision of support, recognition, and feedback), pedagogical leadership (i.e., balancing the promotion of follower wellbeing against organizational goals), and strategic health-promoting leadership (i.e., leaders' actions toward developing and implementing strategies to foster a "healthy workplace").

Integrating Hanson's (2004) ideas, Eriksson (2011, p.17) refined and clarified the definition of health-promoting leadership, suggesting that it "… concerns itself with creating a culture for health-promoting workplaces and values that inspire and motivate employees to participate in such a development." Eriksson et al. (2011) identified three components of health-promoting leadership, including having a supportive leadership style, organizing health-promoting activities, and developing a health-promoting workplace, which could be roughly mapped onto the three aspects of health-promoting leadership proposed by Hanson (2004). Eriksson et al. (2011) also suggests various motives for the development of health-promoting leadership (e.g., improved health, reducing costs). A number of "critical conditions" for the successful enactment of health-promoting leadership were also proposed, including organizational conditions (e.g., financial resources), leader-specific characteristics (e.g., attitudes about health, skills in health promotion), and support afforded to leaders themselves (e.g., structural conditions that free leaders' time to promote follower wellbeing).

Research concerning health-promoting leadership has frequently adopted qualitative methods. That said, there have been various attempts to develop psychometric instruments to quantify aspects of health-promoting leadership (e.g Jiménez, Winkler, & Dunkl, 2017). Arguing that previous models have adopted an approach that is too leader-centric (i.e., they focus too much attention on the "individual level of leadership," p. 7), Jiménez, Bregenzer, Kallus, Fruhwirth, and Wagner-Hartl (2017) sought to expand the concept to include leadership strategies that support and enhance healthy workplaces. Jiménez, Bregenzer, Kallus, et al. (2017) further suggests that this is important, because healthy working environments are optimally understood by the interaction of individual and organizational factors. According to this model, there are seven unique elements that comprise a healthy workplace culture (i.e., health awareness, value-fit, fairness, community, reward, control, and low workload). It is suggested that these seven elements are organized as a circumplex, with health-promoting leadership as its "core." Of note, this model has not, to our knowledge, ever been operationalized with this circumplex structure.

In developing their measure of health-promoting leadership, Jiménez, Bregenzer, Kallus, et al. (2017) translated this model into six dimensions of "work life" borrowed from previous work by Maslach and Leiter (2008). Additionally, one dimension that maps onto "health awareness" is said to reflect "health-promoting leadership conditions." Considering item content, only this "health awareness" dimension really captures leader behavior specific to health promotion. Somewhat consistent with the motivation to "balance" individual and organizational factors, the other six dimensions more readily capture elements of the perceived work environment (e.g., fairness) or elements of job design (e.g., perceived control). Although it would be hard to argue that such elements are not important for health and wellbeing at work in general, only the three items of this scale from the "health awareness" dimension map specifically to leaders' actions. Moreover, although Jiménez, Bregenzer, Kallus, et al. (2017) argue that healthy working environments are best conceptualized as the interaction of the individual (i.e., leader) and these organizational factors captured by this scale, no specific guidance is given for how to use this scale to account for such interactions, and no studies that we identified in our review have explicitly modeled such interactive relationships.

Taking a broader view, the important thing to note about this scale, particularly when contrasting its implied dimensionality and item content against the models of health-promoting leadership described above (i.e., Eriksson, 2011; Hanson, 2004), is the absence of overlap between the theoretical models and the way that health-promoting leadership is measured. Drawing parallels between these scales and their (implied) underlying theory requires a large inferential leap in many cases. For example, it is hard to rationalize the argument that a theory designed to explain leaders' behavior is too leader-centric (Jiménez, Bregenzer, Kallus, et al., 2017). This is actually a symptom of a larger concern, in that to some extent, the status of "health-promoting leadership" suffers from confusion over construct labeling. Indeed, many models and operationalizations share this common label, but their underlying content is far less aligned than their similar names would suggest (Kelley, 1927).

Health-oriented leadership

At the same time that the model of health-promoting leadership was emerging, the concept of *health-oriented leadership* was explored empirically by Franke and Felfe (2011). In contrast to the model of health-*promoting* leadership described above, the model of health-*oriented* leadership was developed by a largely deductive process. According to Franke and Felfe (2011), health-oriented leadership deviates from established and more general leadership models in that it addresses specific aspects of leaders' communication and the health-promoting design of working conditions, as well as leaders' values and their awareness of followers' health. The measure of health-oriented leadership also serves to assess followers' health-oriented values, awareness, and behavior, with components of health-oriented leadership representing health-oriented leadership behavior, health-related awareness, self-efficacy, attitudes, and values.

Unpacking this definition further, health-oriented leadership behaviors can be described both in terms of those related to communication or direct interaction between leaders and followers, from the followers' perspective, and in terms of behaviors that consider the health-conscious design of working processes and maintenance of healthy working conditions. A heuristic model of the process by which health-oriented leadership influences follower health and wellbeing was developed by Franke, Ducki, and Felfe (2015) (see also Franke, 2012). This model is pseudo-ecological in its nature, describing the influence of health-oriented leadership across different levels of analysis, between leaders' and subordinates' perceptions and behaviors. It depicts a "house of health-promoting leadership." The "foundation" of this house is comprised of leaders' "self care," or the way leaders deal with their own health, including how they think, feel, and act in relation to their own health. Moving up one level, leaders' "self care" influences how they role model health to their followers (i.e., "staff care"). "Staff care" involves the perceived manifestation of leaders' values, awareness, and behaviors as recognized by their followers; for example, followers' perceptions that it is important to their leader to actively reduce health risks and that their leader notices when something is wrong with their health. "Staff care," in turn, influences how followers manage their own health (i.e., "self care"). Health and wellbeing are depicted on the "top floor" of the house, with the assumption that leaders' "self care" positively influences followers' "self care" through "staff care."

Franke and Felfe (2011) developed a measure of health-oriented leadership in German. An English version of this scale is provided by Franke, Felfe, and Pundt (2014). Adding ambiguity, Franke et al. (2014) inexplicably relabeled their translated version of this measure as an index of health-*promoting* leadership. To avoid confusion in our review, we characterize all studies using either version of this scale as

health-*oriented* leadership. The scale captures the components of health-oriented leadership described above, as well as health-related attitudes and values. The health-oriented leadership scale can capture either leader-reported self-assessments (i.e., "self care" and "staff care" from the leader's perspective) or external assessments completed by followers (i.e., "staff care," as described above, from the follower's perspective); often, however, only one of these forms is used in research. Feasibly, for any given component of health-oriented leadership (e.g., health-related awareness) one could obtain scores on leaders' "self care," leaders' "staff care," and their followers' perceived "staff care."

Because the health-oriented leadership model and its associated measurement instrument potentially account for perceived leader *and* follower values, awareness, and behaviors, it is feasible to hypothesize and test reciprocal dyadic leader-follower relationships. Despite this, because the model only specifies simple (i.e., unconditional) associations (e.g., association between "staff care" and follower health and wellbeing), it is unclear how such dyadic effects would emerge or develop over time. This is especially true given that single time point, common source methodologies (i.e., typically follower reports of "staff care") are most typically used to study associations between health-oriented leadership and follower outcomes.

Additional "healthy leadership" models

Although the models of health-promoting and health-oriented leadership are by far the most commonly cited models of "healthy leadership," there are a number of related models that appear less frequently within this literature. Despite their relatively low prevalence, these models are important to note because they have served as a basis for the empirical study of "healthy leadership," and because they exemplify the proliferation of constructs in this space. Table 1 provides definitions of each of these constructs, and we next review them each briefly.

One early construct, *organizational leadership for health promotion* (Barrett, Plotnikoff, Raine, & Anderson, 2005), should not be confused with the similarly-named, yet less often studied *individual* leadership for health promotion construct (i.e., Anderson, Plotnikoff, Raine, & Barrett, 2005, see Table 1). Described as a multidimensional and ecological system of actions, organizational leadership for health promotion involves various processes of health promotion, from goal setting to implementation, with an emphasis on continuous development. Barrett et al. (2005) developed a measure of organizational leadership for health promotion, which assesses four dimensions, including "practices for organizational learning," "wellness planning," "workplace milieu," and "organizational member development." Importantly, none of the items that reflect these dimensions address leadership behaviors or styles per se. Confusing matters further, this construct is often interchangeably labeled as "leadership for heart health promotion;" however, no references to cardiovascular functioning are explicitly made (see Barrett et al., 2005).

Della, DeJoy, Goetzel, Ozminkowski, and Wilson (2008) introduced the concept of *management support for worksite health promotion*, which includes, among other aspects, leadership support for health promotion. The "leading by example" instrument, an index designed to capture different aspects of management support for worksite health promotion, includes three items that purport to capture leadership support for health promotion from the followers' perspective. This index has by-and-large been used descriptively, for example, to document changes to workplace health promotion efforts over time (e.g., Della et al., 2010).

Beyond follower perceptions, the concept of *health-specific leadership* (Gurt, Schwennen, & Elke, 2011) is described as a distinct set of leadership behaviors that influence employee health. These behaviors include responsibility for employee health, communication about health-related topics, or setting agendas for workplace health promotion. The logic is that, by highlighting the importance of health, leaders are able to influence their followers' health. To operationalize health-specific leadership, Gurt et al. (2011) use the organizational health and safety questionnaire (Gurt, Uhle, & Schwennen, 2010), which assesses both general and health-specific forms of leadership from the follower's perspective, in terms of both task and relationship-related leadership behaviors.

Vincent (2012a, 2012b) offers a model of *health- and development-promoting leadership*, which is defined by high levels of support and development-related leadership behaviors, and low levels of demanding leadership behaviors (i.e., leadership behaviors that overwhelm followers). To help explain the mechanisms through which leaders affect followers' wellbeing, Vincent (2012b) developed a measure of health- and development-promoting leadership behavior, the health- and development-friendly leadership analysis, which assesses followers' perceptions of leader behavior that have an influence on follower job demands, task requirements, and resources.

Jiménez and colleagues have developed a measure of health-promoting leadership *behaviors* (i.e., health-promoting leadership conditions; Jiménez, Bregenzer, Kallus, et al., 2017). In addition to this, earlier work by Jiménez has conceptualized a "healthy leadership" *style,* which refers to "… humane and relationship-oriented leading with [sic] focus on the subjective well-being of employees and managers" (Jiménez, Dunkl, Hofer, & Vogrincic, 2013, p. 1). Although conceptualized as a unique style of leadership, "healthy leadership" is measured by Jiménez et al. (2013) with a scale of attitudes and behaviors regarding "healthy leadership" (i.e., health-relevant leadership dimensions; Jiménez & Winkler, 2011).

More recently, Dellve and Eriksson (2017) offered a model of *health-promoting managerial work*, defined as evidence-based knowledge of health-promoting psychosocial work conditions, as well as the capability to apply, adapt, and craft sustainable work practices. This systems-based model was developed to support the design and implementation of training programs to support leaders' enactment of workplace health promotion programs.

Finally, the concept of *salutogenic leadership* derives from the systemic salutogenic interaction model (SSIM; Eberz & Antoni, 2016). The SSIM aims to extend earlier work on health-oriented leadership by developing a holistic framework in which health-promoting interactions are the focus, and where dynamics in such interactions are affected both by leaders and followers. Eberz and Antoni (2016) argue that such interactions are neglected by health-oriented leadership models, and that the reciprocal influences between follower health and leader health must be accounted for. Additionally, the SSIM suggests that a sense of coherence (i.e., the comprehensibility, manageability, and significance placed on the experience of stressors; see Antonovsky, 1987) is the mechanism by which health-supportive leadership exerts its positive influence, and that the effect of such leadership is bound by contextual factors and the health-promoting interactions between leaders and their subordinates. To complement the SSIM, Eberz and Antoni (2018) developed the trust, incident management, and pressure (TIMP) inventory as an index of the core facets of salutogenic leadership.

Comparison of different "healthy leadership" theoretical frameworks

Given the number and diversity of "healthy leadership" models, it is difficult to make absolute comparisons. These models have each been developed using different methods, and for different reasons and purposes. That said, there are some common, either explicit or implicit, assumptions present across these models. In terms of explicit assumptions, each of these models of "healthy leadership" claims that there are observable differences in leaders' values, attitudes, and/or behaviors that support follower health and wellbeing. Across models it is assumed that it is possible to improve these values, attitudes, and behaviors. Corollary to this, it is assumed that developing "healthy leadership" is important for workplace health promotion. Finally, "healthy leadership" is assumed to be a meso-level component of health promotion, which serves as a "bridge" between organizational-level health

promotion policies and practices and individual-level (i.e., follower) health and wellbeing. Although some models of "healthy leadership" posit a reciprocal relationship between leaders and followers that is mutually beneficial (see Eberz & Antoni, 2016; Franke & Felfe, 2011), this idea is less universal across models, and as we will see from our review, is rarely if ever rigorously tested.

Considering these common explicit assumptions, it should be clear that there is a great deal of conceptual overlap between models of "healthy leadership." The co-occurrence of so many similar models within this literature is concerning, particularly if they are assumed to operate independently of one-another (Kelley, 1927). We would argue that there is a great deal of commonality between these various models, perhaps more so then there are differences. That said, only a few studies have measured multiple "healthy leadership" constructs simultaneously; however, those few studies find notable overlaps, suggesting the possibility of redundancy (e.g., Eberz & Antoni, 2018, report correlations between their TIMP measure and health-oriented leadership behaviors measured by the Franke & Felfe, 2011 instrument as high as $r_{xy} = 0.56$).

Models of "healthy leadership" likewise make two implicit assumptions. Owing to their unstated nature, two related issues emerge when considering these implicit assumptions. First, these two assumptions are rarely tested in primary research. Second, if these assumptions did not hold up to empirical scrutiny, then the utility of these models for explaining occupational health and wellbeing would be quite limited. The first assumption is that the various conceptualizations of "healthy leadership" serve as stand-alone constructs. That is, "healthy leadership" is assumed to operate independently and incrementally to other forms of leadership, and particularly to the benefit of employee health and wellbeing. For example, one argument for the development of "healthy leadership" models, is that established and general models of leadership behavior or leader-follower relations (e.g., transformational leadership, LMX) are too broad and do not tap specific health-related actions of leaders (see Franke et al., 2011; Franke et al., 2014). Although offered as justification, this proposition remains largely untested in the literature, as models of "healthy leadership" are rarely compared to established leadership theories, and when such tests are offered, they are rarely conducted with sufficient rigor to rule out other plausible explanations. In contrast, researchers have argued that new leadership models need to demonstrate incremental validity in predicting outcomes, above and beyond established leadership constructs (Antonakis, 2017). To this end, Eberz and Antoni (2018) report zero-order correlations between their TIMP inventory and individualized consideration as high as $r_{xy} = 0.75$.

The second assumption of these models is that "healthy leadership" is separable from the outcomes that it purports to influence. In other words, "healthy leadership" behaviors are assumed to be distinct and un-confounded with their intended consequences (i.e., follower health and wellbeing; see Van Knippenberg & Sitkin, 2013). Raising questions regarding this assumption is perhaps an artifact of the fact that early models of "healthy leadership" were inductively developed (e.g., Eriksson, 2011; Vincent, 2012a, 2012b). However, the idea that there is a reciprocity between leader and follower health is likewise symptomatic of this confounding. For example, the "self care" and "staff care" distinction made by Franke and Felfe's (2011) model of health-oriented leadership conflates leaders' health behaviors (i.e., leader-report "self care," e.g., "I actively care for my health") with followers' perceptions of their leader's health behaviors directed toward them (i.e., follower-reported staff care, e.g., "My supervisors actively cares for my health"), and with followers' self-reports of their health behaviors (i.e., follower-reported "self care," e.g., "I notice immediately if something is wrong with my health").

Further examples of such confounding can be seen in the SSIM model by Eberz and Antoni (2016) and in the conceptualization of health- and development-promoting leadership behavior by Vincent (2012b). The SSIM depicts a complex, cyclical process, wherein leader and follower health are dynamically intertwined with health-related cognitions, goals, and emotions of both leaders and followers, with consequent effects on leader and follower sense of coherence. Although the SSIM model conflates leader and follower outcomes in its conceptualization, the operationalization of "healthy leadership" via the TIMP measure focuses on general leader behaviors surrounding trust, error management, and work pressure, without reference to health. The "health" component of this model is conceived as leader and follower sense of coherence. Thus, the consequence of "healthy leadership" is understood by the influence that these general leadership behaviors have on sense of coherence. Similarly, the Vincent (2012b) scale of health- and development-promoting leadership behavior measures 20 general leader behaviors that are not health-specific per se (e.g., clarity, feedback). Evidence for "healthy leadership" is informed by the relationship of these variables with follower-reported health outcomes (i.e., irritation, emotional exhaustion, psychosomatic complaints). As with the SSIM, the consequence of "healthy leadership" is taken as evidence for its existence.

In a broader sense, there is a mismatch between the way these constructs are defined and their specific operationalizations. Fundamentally, this is a content validity issue that has clear bearing on the construct validity of operationalizations of "healthy leadership," and the models that construe them. Also contributing to these concerns about confounding, a majority of studies that purport to study "healthy leadership" in one form or another rely on single time point, single-source (i.e., follower report) methodologies (for two exceptions, see Kranabetter & Niessen, 2017; Köppe, Kammerhoff, & Schütz, 2018). As we will see from our review, prototypically, such studies survey followers about their perceptions of their leader's capacity for "healthy leadership" concurrently with self-reported health and wellbeing. This raises concerns about common source/common method bias, a statistical artifact which can unduly inflate such relationships (Williams & McGonagle, 2016).

Review of empirical studies on "healthy leadership"

Our literature review focuses on empirical, quantitative and qualitative studies of "healthy leadership" and health-related outcomes for employees (e.g., physical and mental health symptoms, subjective and psychological wellbeing). We undertook a systematic approach to literature searching (e.g., Rudolph, Rauvola, & Zacher, 2018). We next describe the methods and results of this review effort; Fig. 1 summarizes the process undertaken here.

Method

We set a number of a priori inclusion/exclusion criteria. The primary inclusion criterion for quantitative studies is that the studies must have considered *both* an explicit operationalization of at least one "healthy leadership" construct (or a clear grounding in one such construct, in the case of qualitative studies) and at least one relevant somatic (e.g., diagnosed illness, chronic health condition), subjective health (e.g., self-reported physical/mental health, burnout), and/or psychological health/wellbeing (e.g., life satisfaction) outcome. Applying this criterion means that studies that only considered relationships between established and more general leadership constructs (e.g., LMX, aspects of transformational or transactional leadership; Winkler, Busch, Clasen, & Vowinkel, 2014, 2015) and such health and wellbeing outcomes were excluded, unless the joint influence of "healthy leadership" was assessed concurrently with these constructs, such that comparisons in predictive validity could be made directly (e.g., comparing the relative predictive validity of aspects of transformational leadership versus "healthy leadership"; e.g., Franke et al., 2014). To be comprehensive, we also considered qualitative studies of "healthy leadership" (e.g., Kranabetter & Niessen, 2016) that clearly delineate the influence of "healthy leadership" on follower health

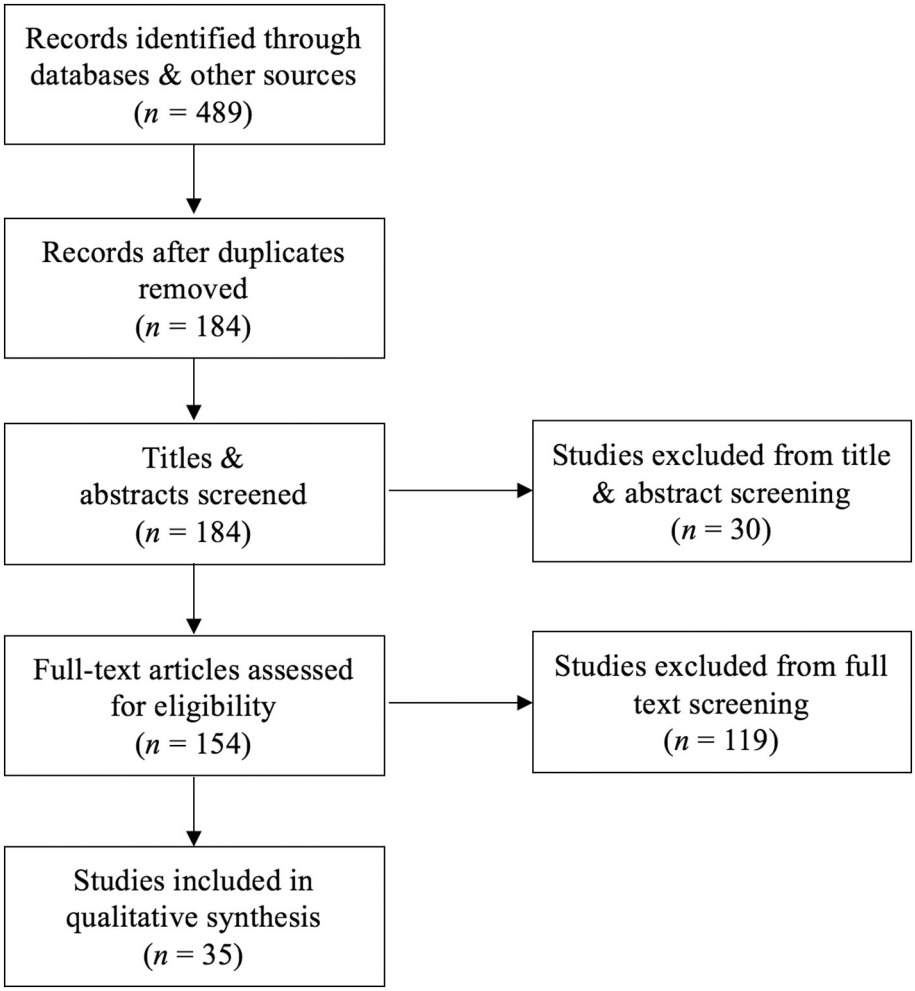

Fig. 1. Flowchart of literature search process.

outcomes, as well as studies that focus on "healthy leadership" (e.g., either in terms of leader or follower reports) and its associations with health and wellbeing outcomes for leaders themselves (e.g., Jiménez, Winkler, & Dunkl, 2017).

To obtain studies that met these criteria, we conducted comprehensive literature searches using several strategies. First, we searched PsycInfo, Web of Science, Google Scholar, and PubMed, using a series of iterative and structured keyword searches corresponding to the constructs discussed above (e.g., "health promoting leadership," "health oriented leadership," "health promoting managerial work," "health specific leadership," "health and development promoting leadership," "salutogenic leadership," "healthy leadership," "management support for worksite health promotion," "organizational leadership for health promotion").

Beyond keyword searches via search engines and databases, we conducted forward and backward searches of highly-cited sources already identified by our primary literature review. We also skimmed the reference sections of relevant review papers (e.g., Akerjordet et al., 2018) and forward searched early theory development papers (e.g., Hanson, 2004). We took additional steps to obtain unpublished studies for consideration in our review, including searching for and considering relevant theses/dissertations and conference papers. Of note, when both published and unpublished versions of a study were identified, we retained only the version which reported more information (e.g., the dissertation by Horstmann, 2018, reports an expanded version of that reported in the published version by Horstmann & Remdisch, 2016).

This process resulted in $k = 489$ sources for potential inclusion in our literature review; for each search, we exported all records and saved them to a database. After removing duplicate references, our database included $k = 184$ non-redundant sources. The first and second authors then met and screened titles and abstracts of these sources for obvious exclusions (e.g., those that were clearly not focused on "healthy leadership"); this process resulted in the exclusion of $k = 30$ studies from our database. The remaining $k = 154$ studies were then subjected to a more in-depth full-text screening for inclusion in our review. To accomplish this, the first and second author met again and collaboratively screened full-texts for each of these sources, applying the aforementioned inclusion/exclusion criteria. Ultimately, these combined efforts resulted in $k = 35$ studies that were retained for our review. Fig. 1 presents a flowchart of this literature search process and Table 2 summarizes the studies included in our review.

Results

In this section, we present the results of our review of the $k = 35$ studies that we identified through our systematic search of the "healthy leadership" literature (see Table 2). We organize our review around the various "healthy leadership" constructs under investigation in these studies. Moreover, within each construct grouping, we present studies in chronological order (i.e., by year), unless otherwise noted. As we have already stated, a great deal of ambiguity emerges when considering the labeling of "healthy leadership" constructs in this literature. For example, we often observed that studies claim to investigate one particular form of "healthy leadership," but measure a different

form. In organizing our review, we have characterized these constructs in line with the authors' original intentions and point out any confusion that may arise from such decisions. Also, our review found several studies that considered multiple measures of different "healthy leadership" constructs (e.g., Jiménez, Winkler, & Dunkl, 2017). To account for such studies, we focus our review on the primary construct of interest within each study. When a secondary "healthy leadership" construct was also measured (e.g., as a covariate, or to demonstrate evidence for incremental or convergent validity), we only review the study once, and within the section that corresponds to the primary "healthy leadership" construct of interest.

Health-promoting leadership

By far, the most frequently studied "healthy leadership" construct identified in our literature review was health-promoting leadership. We identified 11 studies adopting a quantitative approach to studying health-promoting leadership, and five studies adopting a qualitative approach.

Quantitative studies of health-promoting leadership. In a conference paper, Gurt and Elke (2009) used a two-wave complete panel survey design to study the relationship between employee-reported health-promoting leadership and strain across a six-month interval. Considering zero-order relationships, health-promoting leadership was negatively, albeit weakly, related to strain at both Time 1 ($r_{xy} = -0.19$) and Time 2 ($r_{xy} = -0.14$). Moreover, a structural equation model was specified to test the concurrent and time-lagged indirect effect of health-promoting leadership on follower strain through a measure of subjective health culture. Only the results of a fully mediated model are reported, and estimates of indirect effects and associated inferential tests are not offered. Thus, it is difficult to understand the nature of the indirect relationship modeled here.

In an unpublished thesis, Törnblom (2012) investigated relationships between employee-reported health-promoting leadership and health status using a cross-sectional design. The zero-order relationship between health-promoting leadership and self-reported health status suggests a small, positive relationship ($r_{xy} = 0.13$). However, when construed together with transformational leadership in a multiple regression model, the partial regression coefficient representing this relationship is negative ($\beta = -0.43$). This can be explained by the observation that transformational leadership and health-promoting leadership were correlated with each other at $r_{xy} = 0.94$, making these largely redundant (i.e., collinear) predictors.

In an unpublished work, Andersson and Dafteke (2014) report the results of a cross-sectional survey study. A significant zero-order relationship between employee-reported health-promoting leadership and an index composed of job satisfaction, development opportunities, health, wellbeing, and emotional requirements was reported ($r_{xy} = 0.67$).

Winkler et al. (2014) conducted a cross-sectional study with surveys collected from followers and their leaders. Given the nested structure of the data, four separate mixed effects models were considered for each health outcome. Main effect relationships between the four employee-reported health-promoting leadership measures and follower health outcomes were inconsistent, with several relationships evaluated at the $p < .10$ level of statistical significance.

In a cross-sectional survey study, Adler et al. (2017) investigated work-related factors, including both "general" and health-promoting leadership, that are associated with burnout among U.S. military medical personnel. Considering zero-order relationships, follower-reported health-promoting leadership was negatively associated with burnout, PTSD symptoms, and perceived stressors. Dimensions of burnout were considered further in two hierarchical multiple regression models, wherein health-promoting leadership was found to explain incremental variance of $\Delta R^2 = 1.5\%$ and 2.3% in emotional exhaustion and depersonalization, respectively, above and beyond covariates, general leadership, PTSD symptoms, and stressors.

Additionally, we identified six studies of health-promoting leadership by Jiménez and colleagues. Given similarities across these studies, we review them as a set. First, in an unpublished conference paper, Jiménez and Dunkl (2015) report two studies linking their measure of health-promoting leadership conditions to follower health outcomes. Both studies adopt cross-sectional survey designs. Considering zero-order correlations, the first study suggests that health-promoting leadership is positively associated with stress-related recovery; the results of the second study suggest a similar positive relationship with work engagement.

Dunkl, Jiménez, Žižek, Milfelner, and Kallus (2015) investigated relationships among health-promoting leadership, transformational leadership, and followers' recovery and perceived stress. The results of a structural equation model indicate that health-promoting leadership and transformational leadership are moderately correlated with one-another ($r_{xy} = 0.45$). Moreover, both health-promoting leadership and transformational leadership had independent, positive relationships with recovery, but not with perceived stress. Variance explained (R^2) estimates were not provided, so it is difficult to gauge the relative explanatory capacity of health-promoting leadership versus transformational leadership from this study.

In an unpublished conference paper, Bregenzer, Jiménez, and Kallus (2015) present the results of a two-wave incomplete panel study across a six-month interval that investigated effects of health-promoting leadership on follower burnout, perceived stress, and recovery. At Time 1, employees rated their supervisors' health-promoting leadership conditions. At Time 2, they reported their burnout, perceived stress, and recovery. Separate multiple regression models were specified for each health outcome. The models suggested that, of the seven dimensions assessed by the health-promoting leadership conditions scale, only the "control" dimension was consistently related to outcomes (i.e., negatively associated with burnout and perceived stress, and positively associated with recovery). Inconsistent and, for the most part, non-significant relationships were observed for the other dimensions. Additionally, because an incomplete panel design was used, these data are essentially cross-sectional in nature. Thus, it is unclear from this study whether health-promoting leadership affects *changes* in follower health over time.

Jiménez, Winkler, and Dunkl (2017) considered leaders' self-assessment of their own health-promoting leadership conditions. Leaders rated their own health-promoting leadership (i.e. workload, control, reward, community, fairness, value-fit, and health awareness) and health-oriented leadership using Franke et al.'s (2014) measure. Leaders also self-reported their own levels of recovery, perceived stress, and burnout. Of note, only zero-order correlations are reported, so it is difficult to compare the relative operation of the two "healthy leadership" scales against one another. However, these correlations suggest a degree of overlapping variance between these two different scales (i.e., with correlations among dimensions as high as $r_{xy} = 0.65$). That said, a general pattern across correlations suggests that health-promoting leadership is associated positively with recovery and negatively with perceived stress and burnout.

Similarly, but among followers, Jiménez, Winkler, and Bregenzer (2017) investigated relationships between health-promoting leadership conditions, health-oriented leadership, and health outcomes, including perceived stress, recovery, and burnout. Only zero-order correlations are reported for this study, so it is not possible to compare the relative operation of the two "healthy leadership" scales. However, the correlations presented suggest a degree of overlapping variance between these two different scales (i.e., with correlations among these dimensions as high as $r_{xy} = 0.84$). The general pattern again suggests that health-promoting leadership is associated positively with recovery and negatively with perceived stress and burnout.

Lastly, Jiménez, Bregenzer, Kallus, et al. (2017) examined the relationship between health-promoting leadership and follower recovery,

perceived stress, and burnout in two samples of workers who were surveyed as part of a cross-sectional research design. As before, the pattern of zero-order relationships reported suggests that health-promoting leadership is associated positively with recovery, and negatively with perceived stress and burnout. Despite the limitations of the cross-sectional design adopted here, complex structural equation models were tested, specifying causal linkages between health-promoting leadership, recovery, stress, and burnout. Such models were fit separately in both samples. Direct relationships between health-promoting leadership and recovery and stress were simultaneously specified in both models. In each, health-promoting leadership was positively associated with recovery, but not associated with stress. In contrast, direct relationships between health-promoting leadership and burnout were not explicitly modeled here.

Qualitative studies of health-promoting leadership. Eriksson, Axelsson, and Axelsson (2010) report the evaluation results of a leadership development program. The immediate goal of the intervention was to support the development of health-promoting leadership, with a longer-term goal to reduce sickness absence rates among followers. Follower health outcomes were only indirectly inferred, on the basis of leaders' responses to semi-structured interviews, which represented the evaluation of the intervention's effectiveness. One of the products of the intervention was that leaders were tasked with developing "action plans" for initiating, structuring, and monitoring health promotion efforts in their workgroups; some leaders' plans included provisions to analyze sickness rates and work attendance together with their followers.

Juhlin (2012) conducted semi-structured interviews with leaders in a "major organization." The interview asked these leaders to describe various ways in which they had enacted health-promoting leadership, generally organized around themes of accessibility, commitment, context, and control in their role and specifically in relation to followers' health. The influence of health-promoting leadership on follower health was inferred from leaders' responses to such questions. For example, leaders variously mentioned that they consciously rotate employees across job duties, particularly those which are strenuous, as a means of reducing workload and mitigating fatigue associated with repetitive and/or strenuous tasks.

Winkler, Busch, and Duresso (2013) investigated health-promoting leadership behavior through semi-structured interviews with employees and managers. The interviews asked questions surrounding general leadership behaviors, resource- and development-promoting aspects of leadership, the role of leaders in stress management, and the role of leadership for influencing health. An interesting observation from this study is that followers often did not see the connection between their leader's behavior and their own health, or did not necessarily desire for such a link to exist.

In an unpublished thesis, Pärlemyr (2017) describes the results of a qualitative investigation of health-promoting leadership, conducted via semi-structured interviews with private sector leaders. Responses to these interviews were subjected to a manifest content analysis, from which various themes emerged representing leaders' perceptions of the importance of their behavior for their followers' health. The influence of health-promoting leadership on follower health outcomes was inferred from leaders' responses (e.g., leaders suggested that they recognize that their behavior affects their followers' health and wellbeing).

Finally, Furunes, Kaltveit, and Akerjordet (2018) conducted a qualitative study with nurses to study the attributes of health-promoting leaders that are associated with health outcomes for followers. The influence of health-promoting leadership was inferred from responses to semi-structured interviews. The results suggest that certain actions on the part of leaders influence indicators of follower wellbeing. In particular, nurses reported that behaviors of leaders that convey the meaningfulness of their work were particularly health promoting.

Health-oriented leadership

Six studies were identified that conceptualized "healthy leadership" in terms of health-oriented leadership. Five such studies adopt a quantitative methodology, relying on the health-oriented leadership scale developed by Franke and colleagues (e.g., Franke et al., 2014; Franke & Felfe, 2011). The final study identified used a qualitative methodology, grounded within the broader idea of health-oriented leadership.

First, a book chapter by Franke and Felfe (2011) provides an overview of the development of their health-oriented leadership scale. In addition, they offer the results of a two-wave incomplete panel study conducted across four months, with data collected from both leaders and followers. From the description, it is not clear whether these leaders and followers were matched with one-another, however, the single-level analyses presented seem to suggest they are not. Along with health-oriented leadership, a measure of followers' health-promoting behaviors, and two follower health outcomes – irritation and somatic complaints – were collected. Ambiguities regarding levels of analysis notwithstanding, a time lagged mediation model is presented and evidence is provided to suggest that followers' health-promoting behavior mediates the relationship between health-oriented leadership and health outcomes.

Franke et al. (2014) present further evidence for the usefulness of their measure of health-oriented leadership in two studies. The first study is based upon a slightly larger sample of employees that predominantly overlaps with Franke and Felfe's (2011) construct validation effort, reported above; no follower health outcomes were reported in this first study, however. The second study used an incomplete panel survey design, with health-oriented leadership (i.e., "self care" and "staff care" measures) collected at Time 1, and follower health outcomes (i.e., health status, irritation, and health complaints) collected at Time 2. At Time 1, a measure of transformational leadership was also collected. In a series of hierarchical regression models, health-oriented leadership dimensions accounted for incremental variance in follower health outcomes above-and-beyond transformational leadership, explaining between ΔR^2 = 4% to 5% additional variance.

In one of the few multi-level/multi-source studies identified, Kranabetter and Niessen (2017) surveyed leaders and their followers from two different organizations using a cross-sectional research design. Cross-level correlations suggest that leaders' health-oriented leadership was not related to their followers' exhaustion or cynicism. However, in a series of hierarchical mixed effects models, health-oriented leadership was found to moderate the relationship between transformational leadership and both of these follower health outcomes, such that "higher" health-oriented leadership augmented the otherwise negative relationship between transformational leadership and both exhaustion and cynicism. Regarding incremental effects, health-oriented leadership was only found to be incrementally related to exhaustion, and only in one company. Estimates of the variance explained by these models are not provided, so it is difficult to ascertain the magnitude of these relationships.

A study by Santa Maria, Wolter, Gusy, Kleiber, and Renneberg (2018) examined health-oriented leadership in the context of police work. Using a cross-sectional survey design, this study investigated relationships between health-oriented leadership, work-related health behaviors, and health outcomes, including physical complaints, burnout, depression, and wellbeing. Zero-order results and a structural equation model suggest that health-oriented leadership is positively associated with work-related health behaviors and wellbeing, and negatively associated with physical complaints, burnout, and depression.

In another multi-wave/multi-source study, Köppe et al. (2018) investigated how health-oriented leadership behavior serves as a mechanism linking the crossover effects of leaders' exhaustion to followers' somatic complaints. The study used an incomplete two-wave panel design, and a sample of leaders paired with one or two of their followers. Leaders reported their exhaustion at Time 1. Three months

later, at Time 2, followers rated their leaders' health-oriented leadership behavior (i.e., "staff care)" and their own somatic health complaints. No direct effect of leaders' exhaustion on employees' somatic complaints was observed; however, there was a significant indirect effect, in that leaders' exhaustion influenced somatic complaints through employees' assessments of leaders' "staff care" behavior.

Finally, a qualitative study by Kranabetter and Niessen (2016) investigated leaders' behavioral responses to exhausted employees, and perceptions of how these responses contribute to reductions in exhaustion in a sample of managers. Grounded in the concept of health-oriented leadership, 27 leadership behaviors that represent how managers engage with exhausted employees were identified through structured interviews. Interviewees were also asked to report, in their opinion, which of these behaviors contributed most toward reducing exhaustion. Among these behaviors, task (re)design and emotional support were reported as being most efficacious in this regard. With respect to other models of leadership, Kranabetter and Niessen also report that 21 of these behaviors could be mapped onto similar behaviors that define either transformational leadership or individualized consideration and initiating structure.

Health- and development-promoting leadership

We identified four studies that conceptualized "healthy leadership" as health- and development-promoting leadership. First, Vincent (2011) present the results of scale development efforts surrounding the "health- and development-friendly leadership analysis." Unfortunately, incomplete results are presented, however, a brief summary of multiple regression analyses is provided, wherein follower health outcomes were individually regressed onto the health- and development-friendly leadership analysis and transformational leadership, simultaneously. From this summary, health- and development-promoting leadership seem to explain variance in these outcomes incremental to transformational leadership, accounting for between $\Delta R^2 = 5\%$ to 12% additional variance across the outcomes considered.

Vincent (2012a) adopted a similar approach to Vincent (2011), by considering a cross-sectional sample collected from employees working in a variety of sectors. Only zero-order relationships are reported; thus, it is not possible to directly evaluate the relative contributions of different leadership measures collected for explaining variation in follower health. That said, there was an expected pattern of zero-order relationships present in these data, such that health- and development-promoting leadership was positively associated with work engagement, and negatively associated with irritation and emotional exhaustion. It should also be noted that a similar pattern of relationships was observed for support-oriented leadership.

Adopting a similar design, measurement, and analysis strategy to the preceding two studies, Vincent (2012b), collected a cross-sectional sample of employees. Considering incremental effects, health- and development-promoting leadership explained variance in irritation, emotional exhaustion, and psychosomatic health complaints above and beyond transformational leadership and support-oriented leadership, explaining between $\Delta R^2 = 1\%$ to 12% additional variance.

Finally, a report by Rigotti et al. (2014) presents results of the "rewarding and sustainable health-promoting leadership" project. First, in a cross-sectional pilot study, only zero-order relationships are reported, so it is not possible to ascertain the relative contributions of health- and development-promoting leadership against these other leadership constructs. That said, these relationships suggest that health- and development-promoting leadership is associated with follower health in the expected direction for all outcomes, with the exception of somatic problems for which no association was observed. Second, the "main study" reported by Rigotti et al. (2014) presents the results of both a three-wave incomplete panel survey study of leaders and their followers, and an intervention study. The intervention, in which a subset of the total sample participated, was a leadership development program designed to enhance rewarding and health-supporting leadership behavior. The intervention took place during multiple sessions over two years, and involved a combination of lectures, team-based workshops, coaching, and diary writing. The results of this intervention provided weak and mixed results for its capacity to enhance health- and development-promoting leadership behaviors and follower health, with several relationships gauged against a $p < .10$ standard.

Regarding results from the survey component of this study, only responses from "control group" followers (i.e., those who did not participate in the intervention) were considered. Regression models are reported for a subset of the available health outcomes noted above, considering Time 1 to Time 3 relationships, constituting a lag of 22-months. Health- and development-promoting leadership accounted for a significant amount of variance in work engagement, exhaustion, irritation, somatic stress, and depression. Incremental models were also tested, for certain combinations of other leadership variables (i.e., transformational, authentic, and fair leadership, and abusive supervision). However, such predictors were only included in these models if they exhibited statistically significant zero-order correlations with the outcome. Accordingly, the most comprehensive (i.e., with respect to ruling out alternative leadership mechanisms) conclusion to be drawn here is that health- and development-promoting leadership accounts for incremental variance in work engagement, exhaustion, and depressive symptoms, above and beyond transformational and authentic leadership. These incremental relationships are observed without controlling for baseline (Time 1) levels of corresponding outcomes, so these otherwise longitudinal relationships are understood to be essentially cross-sectional in nature.

Additional "healthy leadership" models

Although most studies identified as part of our literature search efforts could be classified as examining health-promoting, health-oriented, or health- and development-promoting leadership, we identified a number of other, related conceptualizations of "healthy leadership."

Health-specific leadership

Two studies we identified focus on health-specific leadership. First, Gurt et al. (2010) surveyed a sample of employees, and report zero-order correlations that suggest that both "general" and health-specific leadership are positively related to job satisfaction, and negatively related to strain. Moreover, a complex partial mediation model was tested using cross-sectional data. Complete parameter estimates are not reported; thus, it is not possible to make direct comparisons between the relative predictive capacities of "general" and health-specific leadership. That said, the zero-order effects of "general" leadership appear to be of a higher magnitude than those of health-specific leadership.

Second, Horstmann (2018) presents two studies as part of a dissertation that investigated relationships between health-specific leadership and follower health. In the first study, zero-order results suggest that health-specific leadership is negatively associated with health complaints. Additionally, even though a cross-sectional design was employed, a complex multiple-mediator model was tested, wherein health-specific leadership was associated with health complaints through social resources and demands. Despite the limitations of inferences from such a model, at the very least, these results suggest that health-specific leadership has an incremental relationship with health complaints, insomuch as it explains variance above and beyond social resources and demands. However, ΔR^2 estimates are not reported herein, making it difficult to judge the strength of this incremental effect.

In the second study, another cross-sectional survey design was employed. Zero-order relationships suggest that health-specific leadership is positively associated with "self care," and negatively with burnout. Despite the cross-sectional design, a multilevel moderated-mediation model was also tested, accounting for the nesting of respondents within participating geriatric care facilities. This model specifically tested whether personal initiative (i.e., a form of proactive

behavior) moderates the indirect effect of health-specific leadership on burnout through "self care." Moderation results suggest that higher levels of personal initiative enhance the positive relationship between health-specific leadership and "self care." Moreover, from the parameters considered in this mediation model, we can infer that health-specific leadership predicts (lower) burnout incremental to the influence of "self care." However, because estimates of ΔR^2 are not provided, it is challenging to ascertain the strength of this effect.

Healthy leadership

Although we have used the phrase "healthy leadership" to generally characterize this entire literature, we did identify one study that conceptualized healthy leadership as a distinct construct using this label. Specifically, an unpublished conference paper by Möltner, Benkhofer, and Hülsbeck (2016) studied healthy leadership, and its health-related correlates. In terms of leader health outcomes, this study reports that leaders with higher levels of both health-promoting employee leadership and self-management reported higher levels of "mindfulness" and more positive health cultures in their organizations.

Leadership support for health promotion

We identified two studies that conceptualized "healthy leadership" in terms of leadership support for health promotion. First, in a multi-source study, Milner et al. (2013) investigated the relationship between leadership support for health promotion and employee wellbeing outcomes. Despite the cross-sectional nature of these data, a serially mediated multilevel structural equation model was specified, with leadership support for health promotion indirectly affecting follower wellbeing through workplace health promotion programs and policies at the company level (i.e., the presence or absence of discrete health promotion programs and policies) and perceptions of company commitment to workplace health promotion at the follower level. Although this model did not specify the direct relationship between leadership support for health promotion and employee wellbeing, the zero-order cross-level correlations between these variables suggests that they are not statistically significant.

Second, an unpublished dissertation by Hoert (2014) used a cross-sectional survey across four different organizations. In terms of zero-order relationships, leadership support for health promotion was correlated in the expected directions with each of these health outcomes (e.g., it was associated with higher job satisfaction and lower job stress). However, in a series of multiple regression models where each health outcome was regressed onto leadership support for health promotion and perceived organizational health climate simultaneously, different patterns of relationships were observed. For example, perceived organizational health climate, but not leadership support for health promotion, was associated with higher job satisfaction, lower job stress, and higher work engagement. Of note, the non-independence that resulted from the nesting of employees within the four organizations that were surveyed was not addressed.

Individual/organizational leadership for health promotion

Our literature searches found one study that operationalized individual/organizational leadership for health promotion. Specifically, Barrett, Plotnikoff, and Raine (2007) report on the results of a program evaluation effort surrounding a large-scale, multi-year health promotion program. Only statistically significant predictors of each outcome are reported, however those that are reported indicate that certain facets of organizational leadership for health promotion are associated with "better" follower health (e.g., reduced tobacco use and increased physical activity).

Salutogenic leadership

We identified two studies of salutogenic leadership. Of note, these studies adopt quite different conceptualizations of the idea of salutogenic leadership. First, Axewill (2013) describes salutogenic leadership in line with the general concept of salutogenesis (Antonovsky, 2005; Hanson, 2010). A sample of managers were purposefully recruited to participate in structured interviews on the basis of having different levels of "healthy attendance." The degree of salutogenic leadership engaged in by each manager was ascertained from their responses, and compared to their healthy attendance rates; findings suggest that managers generally balanced production-oriented versus salutogenic leadership styles. However, the manager deemed to have the "most" production-oriented (i.e., as opposed to salutogenic) leadership style also had the lowest rate of healthy attendance.

Second, Eberz and Antoni (2018) report on the validation of the trust, incident management, and pressure (TIMP) inventory in two samples of working adults. The TIMP inventory was found to relate to sense of coherence. Moreover, the predictive capacity of the TIMP inventory for explaining sense of coherence was found to be incremental to transformational leadership in the first sample and other "healthy leadership" constructs (i.e., health-oriented leadership) in the second sample. In both samples, adding salutogenic leadership explained an additional $\Delta R^2 = 19\%$ of the variance in sense of coherence.

Health-promoting managerial work

One study identified through our literature searches, Dellve and Eriksson (2017), operationalized "healthy leadership" as health-promoting managerial work. This study reports cumulative results from six separate leadership training programs, and a mixed-methods analysis of these program's. Following a thematic analysis of responses to interviews, results suggested that the training had a positive influence on leaders, broadening their perspectives and affording tangible tools for encouraging health promotion. Regarding leader health outcomes, leaders also reported significant increases in the quality of their psychosocial work environments and increases in job satisfaction following their participation in the training program. These results came from a larger project, more fully elaborated on in an earlier unpublished report (i.e., Eriksson, Dellve, Strömgren, & Edström Bard, 2016). Of note, this report provides more complete details of the influence of the training program on follower health outcomes, taken from follow-up surveys distributed to followers. Regarding such outcomes, job satisfaction and vitality increased among those followers whose leaders were more engaged in the training program. Likewise, the number of sickness absences increased in workplaces where leaders were more engaged in the program.

Descriptive qualitative studies

Finally, of note, our review suggests that most qualitative studies of "healthy leadership" adopt a phenomenological perspective, which is to say that they presuppose the existence of, and seek to understand, people's experiences with "healthy leadership" (e.g., Furunes et al., 2018). The qualitative studies identified through our literature searches largely represent descriptive efforts, and tend to be represented by very small samples (i.e., *n*s range from 5 to 12 participants/interviewees), including a number of unpublished, primarily Swedish, theses and dissertations (e.g., Axnér, 2015; Gustavsson, 2014; Jansson, 2016). These studies are descriptive of "healthy leadership" in general, and primarily aim to describe what "healthy leadership" means to leaders themselves, without regard to its influence on followers (i.e., either because it is not assessed, or because it is assumed through purely anecdotal accounts). Given that no ascertainable follower health outcomes are obtained or reported in such studies, they were otherwise disqualified from our main literature review.

Discussion

In this final section of the paper, we summarize the most important points of criticism regarding the research we reviewed above.

Table 4
Summary of critiques levied against the "healthy leadership" literature.

Criticism of "healthy leadership" research & theory	Description of criticism & relevant examples from existing literature	Means of addressing criticism in future research
Jingle fallacies	The incorrect assumptions that two constructs are the same because they have the same label	- Empirically differentiate "healthy leadership" constructs from one another via content analyses and factor analysis models
Jangle fallacies & construct proliferation	The incorrect assumptions that two very similar constructs are distinct because they have different labels (e.g., "health-promoting leadership" and "health- and development-promoting leadership").	- Empirically consolidate "healthy leadership" constructs from one another via content analyses and factor analysis models
Unclear construct definitions and operationalizations	Ambiguities in defining (e.g., Möltner, Benkhofer, & Hülsbeck, 2016) and operationalizing (e.g., Vincent, 2012a) healthy leadership constructs	- Adopt more rigorous definitions of "healthy leadership" that do not rely on inductive inferences - Clearly define "rules" for operationalizing "healthy leadership"
Confounding of "healthy leadership" behavior and its intended outcomes	The behaviors that defined "healthy leadership" are conflated with their intended influences on health and wellbeing outcomes (e.g., the "self care" and "staff care" distinction made by Franke & Felfe's, 2011 model of health-oriented leadership)	- Clearly differentiate those attitudes, values, and behaviors that are classified as "healthy leadership" - Separate the measurement of "healthy leadership" from its intended outcomes by collecting multi-source data
Poor methodology	Use of sub-optimal research designs, that do not allow for unambiguous conclusions to be drawn (e.g., cross-sectional designs; Winkler et al., 2014)	- Design observational studies that collect fully-crossed and lagged, multi-wave, and multisource data - Design intervention studies that implement RCT or RD designs
Incomplete reporting of statistical models	Failing to report all necessary information to gauge the appropriateness of statistical conclusions (e.g., Jiménez and Dunkl (2015 do not report variance explained effect size metrics)	- Follow "best practices" for the reporting of statistical models (e.g., APA JARS standards)
Imprecise predictions derived from "healthy leadership" frameworks	Existing "healthy leadership" frameworks do not lend themselves well to precise predictions	- Unify and integrated "healthy leadership" frameworks, and make specific provisions for testable assumptions to be gleaned therefrom
"Healthy leadership" measurement suffers from "phantom validation"	An unsystematic approach to the development of measures of "healthy leadership" is apparent in this literature (e.g., Jiménez & Dunkl, 2015; "Health-Promoting Leadership Conditions")	- Adopt rigorous "best practices" for the development and construct validation of "healthy leadership" measures - Conduct re-validation studies of existing "healthy leadership" measures
Risks associated with viewing "healthy leadership" as a panacea	Overemphasizing the importance of "healthy leadership" risks neglecting structural impediments to health and wellbeing which could be more directly acted upon (e.g., work and job design)	- Adopt a critical perspective on the relative utility of "healthy leadership" against other systems, policies, and practices that may more directly influence health and wellbeing

Subsequently, we address the final goal of this paper by outlining an integrative research agenda including recommendations for "healthy leadership" theory development, empirical research, and practical applications.

Summary of criticisms of research on "healthy leadership"

Our review of the "healthy leadership" literature, suggests numerous problems that limit the validity of conclusions that can be drawn from this research. We discuss these critiques here and summarize them in Table 4. First, the literature on "healthy leadership" is prone to "jingle" and "jangle" fallacies, which entail the wrong assumptions that two constructs are the same because they have the same label (jingle fallacy), or that two very similar constructs are distinct because they have different labels (jangle fallacy; Kelley, 1927). There are jingle fallacies in that a number of constructs in this literature have been labeled health-promoting leadership (or very similarly, such as health- and development-promoting leadership), even though the content of the measures used to operationalize these constructs is far less aligned than their similar names would suggest. At the same time, there are jangle fallacies in that several "healthy leadership" constructs do not include health- and even leadership-specific items but, for example, items on fairness and control (Jiménez, Bregenzer, Kallus, et al., 2017). Other scales, such as salutogenic leadership (Eberz & Antoni, 2018), include items (e.g., building trust) that are very similar to those included in established leadership measures (e.g., LMX quality). Thus, the positive effects of many "healthy leadership" constructs on follower health and wellbeing may be confounded by effects of beneficial job design characteristics and leadership constructs such as LMX quality and individualized consideration. The existence of similar "healthy leadership" conceptualizations also represents a case of construct proliferation (i.e., "the accumulation of ostensibly different but potentially identical constructs representing organizational phenomena," Shaffer et al., 2016, p. 89), already a noted concern in the broader leadership literature (Avolio, 2007; Derue, Nahrgang, Wellman, & Humphrey, 2011).

Second, the inductive development of many "healthy leadership" measures leads to ambiguity in terms of what they actually capture. For example, Möltner, Benkhofer, and Hülsbeck (2016) asked leaders what "healthy leadership" means to them personally, and the leaders themselves identified attitudes, values, and behaviors that cut across several different "healthy leadership" models. Related concerns include unclear procedures for scoring measures (e.g., Vincent, 2012a) and the open question of whether multidimensional measures should be included as separate main effects or as overall aggregate scores in statistical analyses.

Third, much of the empirical research on "healthy leadership" suffers from methodological problems that are not unique to this area, but have been lamented in the broader literature on organizational behavior (e.g., Aguinis & Vandenberg, 2014). Most studies use single time point/cross-sectional and single-source designs (i.e., self-reports by only leaders *or* followers), raising concerns about common method bias and the confounding of leadership behaviors with their intended outcomes. Additionally, most studies do not control for established leadership constructs, thus leaving open the question of whether "healthy leadership" constructs explain incremental variance in follower health and wellbeing.

Fourth, the reporting of results of empirical studies on "healthy leadership" often is cumbersome. For example, although several studies assessed control variables, they did not report unique variance explained by "healthy leadership" constructs in follower outcomes. Finally, we note that most conceptual and empirical works on "healthy leadership" have not adopted a critical approach when introducing new concepts or discussing research findings. Researchers in this area seem to be rather convinced that "healthy leadership" is a distinct, more specific, and important construct that has unique and beneficial effects. Compared to the goal of demonstrating the relevance of "healthy leadership," critical tests of theory often seem to take a backseat in this

literature. Like other leadership constructs, the promise of "healthy leadership" has an appealing "hook" that has drawn researchers in (Van Knippenberg & Sitkin, 2013). There is an intuitive, appealing message underlying this literature – leaders can do "things" which directly influence their followers' health and wellbeing. Despite this enthusiasm, the state of this literature is too scattered and underdeveloped to warrant all of the attention that this concept has received. That said, we see a variety of opportunities to improve research in this area.

A "new agenda" for theory development, research, and practice

Based on the critiques outlined above, we offer a number of actionable recommendations for future theoretical, empirical, and practical work on "healthy leadership."

Recommendations for theory (re)development

First and foremost, this area would benefit from enhanced theorizing regarding the nature of "healthy leadership" and clearer guidance regarding its (assumed) influences. In terms of theory (re)development, it is therefore important that scholars stop introducing additional, new and unique "healthy leadership" constructs and associated labels and instead focus on better understanding, (re)developing, and integrating those that already exist (see Table 1) into a broader and unified "healthy leadership" theoretical framework. Such a framework should clearly distinguish between leader attitudes, values, and behaviors related to health and wellbeing. Moreover, it would seem necessary to include multiple measurable dimensions within each of these categories (e.g., behavior related to sickness presenteeism, behavior related to follower physical and mental health, attitudes about health and wellbeing).

Efforts at (re)developing a more unified "healthy leadership" theory must also take steps to ensure that the predictions that follow from it are specific and testable. One general criticism against existing "healthy leadership" frameworks is that they do not offer precise predictions about the linkage between leaders' attitudes, values, and behaviors on the one hand, and associated favorable health and wellbeing outcomes on the other. Moreover, such theories generally do not make predictions about the conditions that give rise to "healthy leadership." As suggested, the basic premise underlying the idea of "healthy leadership" is that "doing more" of it has a concomitant (assumed to be) positive influence on such outcomes. For example, considering the consequence of follower wellbeing, the common prediction would be: "*If* leaders enact 'healthy leadership', *then* the wellbeing of their employees will improve (or be higher, especially in comparison to those who do not)." This prediction can be boiled down to a direct function, in which follower wellbeing is understood as a function of healthy leadership:

$$\text{follower wellbeing} = \boldsymbol{f}(\text{healthy leadership}) \quad (1)$$

It is this type of precise definition that is currently lacking in the theorizing concerning "healthy leadership." Such functional predictions could also be extended to include health and wellbeing outcomes for leaders, as well as outcomes at different levels of analysis (e.g., unit-level wellbeing, indexed subjectively or objectively).

To begin addressing the need for enhanced theory, we propose a process model of "healthy leadership" to inform future work (see Fig. 2). Given that many of the critiques levied here would need to be resolved before tests of this model could be reasonably attempted, we consider this to be a "speculative" model in the spirit of House's (1976) theory of charismatic leadership. Thus, we classify this as a "2019 model of 'healthy leadership,'" which we offer in the hope that "…at some future date, this theory will have led to a better theory." (House, 1976 p. 26). In brief, the "core" of our proposed model suggests that "healthy leadership" components (i.e., attitudes, values, behaviors) influence follower and leader wellbeing outcomes both directly and indirectly (through follower health-related attitudes, values, and behaviors). These effects are incremental to those of established leadership constructs (e.g., LMX, consideration) and work characteristics (e.g., job demands) that explain variance in follower and leader wellbeing. Moreover, the effects of "healthy leadership" are likely moderated by leader individual differences and contextual conditions (see Fig. 2 for examples). Beyond the core processes of the model, we propose that relevant leader individual differences and contextual conditions have direct and interactive effects on "healthy leadership," and that follower and leader wellbeing directly and interactively influence more distal, objective and subjective work outcomes.

Although the need for enhanced theorizing is pressing, in order to embark on tests of this model, there is a broader landscape of "healthy leadership" that must be mapped. We suggest that this mapping process must unfold in a systematic and ordered process. Our suggestions here are geared toward expanding the simple functional relationship described above, as a means of expanding our understanding of "healthy leadership." Much of the effort required to integrate and unify "healthy leadership" theory will be informed by a more rigorous research agenda.

Recommendations for empirical research

Fig. 3 outlines a flowchart of the four steps involved in our proposed research agenda and examples of research questions to ask at each step. Our goal here is to provide prescriptive advice that, if followed, would advance our empirical understanding, while additionally serving the development of a more codified theory of "healthy leadership." Where relevant, we provide guidance for the types of research designs and methodological concerns that are necessary to realize this research agenda.

Step one. The first step in this new research agenda (Fig. 3, Step #1) is to come to an understanding of how the multitude of "healthy leadership" constructs are related and how they can be differentiated from one-another (see Table 4). We need to establish a better understanding of the construct domain of "healthy leadership;" we need to define "what it is" and "what it is not." The sheer number of "healthy leadership" constructs that exist in this literature is a liability to its broader contributions to our understanding of leadership- and occupational health-related phenomena. Thus, the "jingle-jangle" of "healthy leadership" has to be addressed explicitly, and this must be done before attempts to differentiate it from other constructs are considered. This can be done in a number of ways. For example, the overlap of these constructs can be addressed through a thorough content analysis of existing measures, which can be triangulated through factor analytic methods and clustering/profile methodologies. Particular attention must be paid to the construct validation of various measures of "healthy leadership" found in the literature (see Table 3). Indeed, a notable critique that could be levied against the measurement of "healthy leadership," is that it suffers from what has been deemed "phantom validation" – the practice of re-using unvalidated measures across multiple studies, and justifying this practice via citing research that has used such unvalidated measures in the past (Friedberg, 2019).

Once a clearer understanding of the "healthy leadership" construct domain is established, the next step is to further establish its nomological network through offering empirical evidence for convergent and divergent validity. Beyond definitional concerns, evidence for convergent and divergent validity speaks to the heart of the notion of construct differentiation. To this end, it is especially important for research to address and eliminate the confounding of actual "healthy leadership" behaviors and their intended outcomes (see Van Knippenberg & Sitkin, 2013). Specifically, "healthy leadership" could be defined as leader behavior (influenced by attitudes and values) that addresses follower health and wellbeing, but it should not be defined as behavior that per se has positive effects on these outcomes. Overall, we believe that there is a place for "healthy leadership" behavior in the

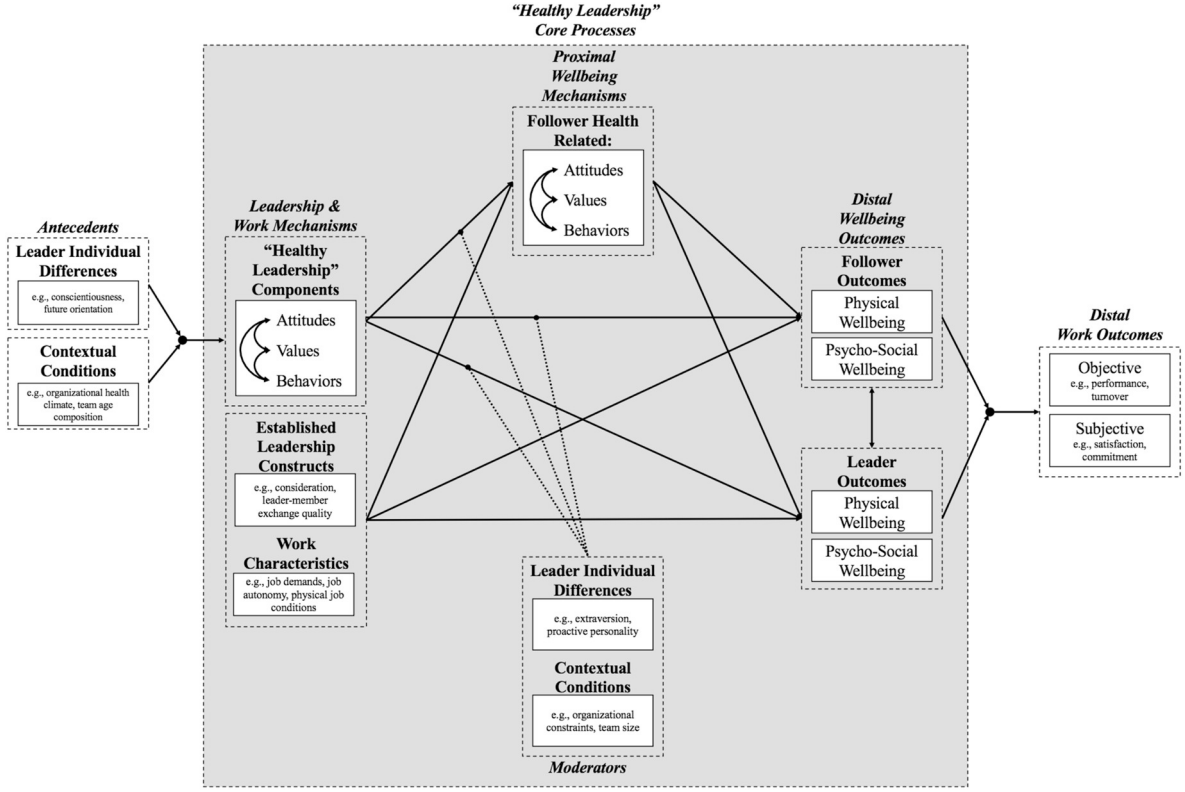

Fig. 2. Proposed model of "healthy leadership".
Note. Dotted lines indicate moderation. Arrows converging with circles indicate possible direct and interactive effects.

broader leadership theoretical space, but the coordinates of this space need to be mapped and articulated more clearly.

Step two. The second step in this new research agenda (Fig. 3, Step #2) would be to establish evidence for the incremental validity of "healthy leadership." This step will serve to additionally expand our understanding of the construct space that defines "healthy leadership" by establishing the unique role that it plays in the prediction of relevant outcomes (e.g., follower health and wellbeing) above-and-beyond established leadership constructs. For example, it is essential that scholars establish whether "healthy leadership" should be construed as distinct from or integrated with established leadership constructs.

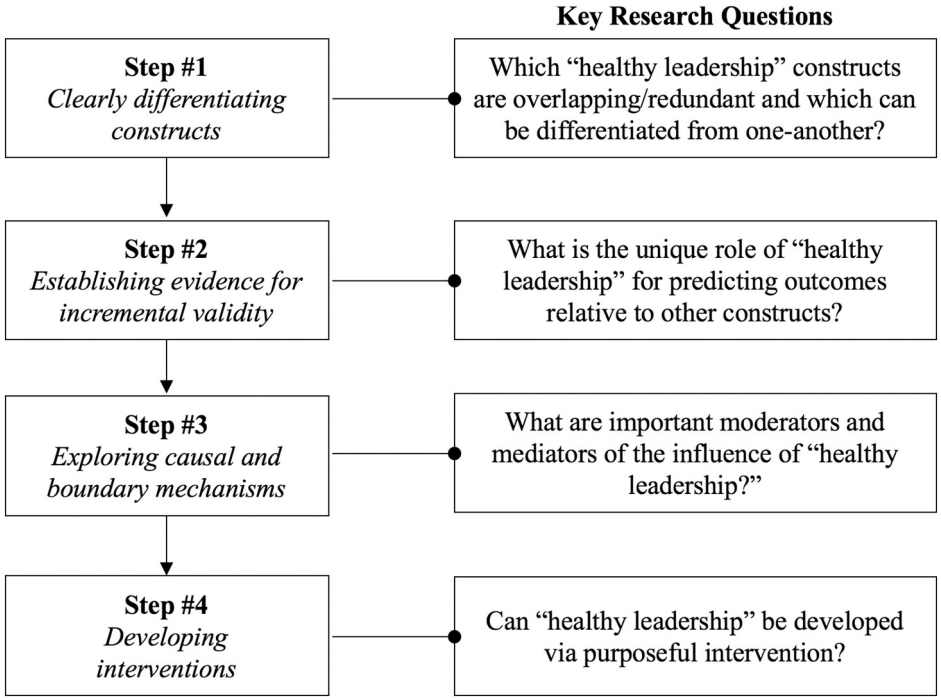

Fig. 3. Outline of steps in "new agenda" for research on "healthy leadership".

Indeed, “healthy leadership” could also be conceived as a specific behavioral outcome of high LMX quality (e.g., leaders taking responsibility for followers' health and wellbeing, but also followers becoming more aware of the health and wellbeing of their leaders). “Healthy leadership” could also be understood as a specific manifestation of the broader leadership style of individualized consideration, which involves leaders showing an awareness of and concern for their followers' health and wellbeing.

Beyond the incremental contributions of “healthy leadership,” its unique role in predicting health and wellbeing above and beyond other individual and organizational factors that promote these outcomes needs to be established. Indeed, research as yet to widely consider “healthy leadership” effects incremental to established predictors of health and wellbeing at the individual level (e.g., proactivity, job crafting) or at the team and organizational levels (e.g., job characteristics, personnel practices).

Regardless if tested against existing leadership constructs, or other individual or team and organizational factors, it is imperative that future studies of “healthy leadership” report its incremental predictive validity in terms of variance explained above and beyond these broader and better-established constructs. These models should ideally be examined using fully-crossed and lagged longitudinal research designs that permit modeling temporal dynamics and allow for more appropriate inferences about causality and mediation (Antonakis, 2017). Additionally, to avoid pitfalls of common method bias, ratings of “healthy leadership” and health and wellbeing outcomes should come from different sources. Ideally, to avoid rating biases, “healthy leadership” behavior should be observed during leader-follower interactions and coded using theory-based, a priori established behavioral categories (see Lehmann-Willenbrock, Meinecke, Rowold, & Kauffeld, 2015).

Step three. The third step in this new research agenda (Fig. 3, Step #3) should be to explore causal and boundary mechanisms of the influences of “healthy leadership.” Research to establish direct and unconditional relationships between “healthy leadership” and health and wellbeing outcomes is useful for addressing the clarification of its construct space and nomological network. However, beyond such relationships, research needs to establish *why* and *when* “healthy leadership” effects manifest to influence health and wellbeing.

“Why” questions concern mediating mechanisms, and because such mechanisms imply a causal process, they are not easy to study. Indeed, cross-sectional and single time point designs, such as those that are typically used in “healthy leadership” research, are unsuitable to study causal mechanisms (Antonakis, Bendahan, Jacquart, & Lalive, 2010). Moreover, as with many dynamic phenomena, there is the possibility for reciprocal mechanisms linking organization-, leader-, and follower-level processes and outcomes via reinforcing loops between leaders and followers, and the dynamic interplay within their work environments. For example, in a top-down, cascading process, a “healthy organizational climate” may foster “healthy leadership” which, in turn, affects follower health and wellbeing. From the bottom-up, follower health and wellbeing may reinforce “healthy leadership” which, in the aggregate, could be construed as one index of a “healthy organizational climate.” This implied dynamic and non-recursive process may approximate a “wellbeing spiral,” making the specification of mediating mechanisms challenging and begging for research designs that can capture this implied dynamicity. Moreover, multilevel designs that capture responses from top management, HR officers, supervisors, and subordinates would allow for the emergence of these processes to be studied.

“When” questions concern moderating mechanisms, and ask “For whom…?” type research questions regarding the relative efficacy of “healthy leadership.” Because “when” questions concern conditional mechanisms, they are likewise difficult to study. However, given the assumed top-down influences of “healthy leadership” on follower health and wellbeing, it is feasible that there are a number of situational contingencies for its relative effectiveness. For example, although the vast majority of studies have focused on outcomes of “healthy leadership,” future research could examine potential dispositional and contextual factors as antecedents and/or moderators of “healthy leadership.” The findings of such research could have bearing for the development of “healthy leadership” across individuals' careers.

Regarding methodologies, we additionally suggest that scholars move away from inductive and qualitative, and especially phenomenological approaches that generate various descriptions of “healthy leadership” to deductive and quantitative designs that rigorously examine antecedents and consequences, as well as mediator and moderators of “healthy leadership.” As suggested above, such efforts must also take into account effects of established leadership constructs, particularly, LMX quality and individualized consideration.

Step 4. The fourth step in this new research agenda (Fig. 3, Step #4) is to develop interventions to enhance “healthy leadership.” Example research questions to be addressed here include, “By what means can ‘healthy leadership’ be developed?” and “Does ‘healthy leadership’ development have a positive influence on leader and follower health and wellbeing?” In understanding the efficacy of such efforts, intervention studies should use randomized control trials to further bolster inferences about causality (see Podsakoff & Podsakoff, 2019). Absent the possibility of “true” randomization, researchers should consider adopting quasi-experimental methods, including regression discontinuity designs, as a means of estimating treatment effects for “healthy leadership” interventions (Antonakis et al., 2010).

These four “steps” provide a path forward for research on “healthy leadership” that will enhance the quality and impact of this body of work. Our hope is that research on “healthy leadership” will adopt a more critical focus guided by the principle of parsimony, as opposed to a more lenient, confirmatory approach in the design of studies, analyses, reporting, and discussion. By adopting a sound empirical strategy, including a more rigorous focus on measurement and theoretical (re) development, the impact of this research will be greater.

Recommendations for practice

Regarding applications of “healthy leadership,” our general advice to organizational practitioners is that they should likewise adopt a critical attitude toward existing research on “healthy leadership,” taking into account the limitations of this research with respect to theory, methods and, sometimes, unclear, selective, and uncritical reporting of findings. The heterogeneous literature on “healthy leadership” is currently too inconclusive and plagued with conceptual and methodological problems to allow for more definite recommendations for leadership practice. Importantly, we are not suggesting that leaders and organizations should ignore employees' health and wellbeing—on the contrary. We only suspect that research in this area might run the risk of “reinventing the wheel,” because follower health and wellbeing might already be, to some extent, addressed and influenced by established and more general forms of leadership behavior.

We do see promise in the possibility for the assumed outcomes of “healthy leadership” to be a mechanism by which leadership effectiveness is gauged. For example, one metric of a leader's value to the organization (i.e., their “return on investment”) could be the health and wellbeing of their followers. The appeal of this idea, is that it would serve as a direct mandate for the duty of care principle, putting a higher degree of responsibility for ensuring follower health and wellbeing on leaders themselves. This is noteworthy in an era where the burden of maintaining one's wellbeing has shifted increasingly to the individual, rather than the institution.

Moreover, the impact of “healthy leadership” could to be gauged against tangible behavioral (e.g., sickness absences) and economic metrics (e.g., healthcare costs). These ideas beg further the question of whether we should (re)structure reward systems for leaders to promote

the application of "healthy leadership" behaviors. Perhaps leaders should be held accountable for their followers' health and wellbeing, much like they would for their individual "bottom line," economic contributions. Such questions raise an important, as-of-yet unlevied critique of "healthy leadership" in general. Specifically, we have not directly addressed whether the fundamental premise of "healthy leadership" is itself a good thing for followers, leaders, their organizations, and society as a whole. Like many phenomena, an overemphasis on the role of "healthy leadership" is accompanied by certain hazards associated with its popularity. Putting the onus for follower health and wellbeing on leaders' shoulders risks the possibility for an "All we need is leadership…" mentality to emerge. The risk here specifically being that, like any supposed panacea, this mentality holds up "healthy leadership" as a "cure-all" remedy, but does nothing to change the systems that make work a detriment to employee health and wellbeing in the first place (e.g., poor-quality job characteristics).

Conclusion

Our review of research on "healthy leadership" literature contributes to leadership literature in at least three important ways. First, our conceptual overview and our systematic and critical review brings needed clarity to this burgeoning research topic. Second, we argue that the multiplicity in "healthy leadership" models and constructs is a liability rather than a strength of this literature. To be clear, we would not argue against the need to consider specific health-related leader attitudes, values, and behaviors, necessarily. Rather, very similar constructs have been offered and adopted uncritically and without regard for the broader nomological network of leadership. We hope that our review and critique serves as a call for more careful theoretical and empirical elaborations about this general idea. Finally, we have critically evaluated existing research regarding the confounding of actual leadership behaviors and their intended outcomes, and we have assessed whether research has sufficiently addressed the issue of the incremental validity of "healthy leadership." Based on these critical evaluations, we have outlined a set of prescriptive recommendations for theory development efforts, future research, and practical applications regarding "healthy leadership." We hope that our review will help scholars and practitioners critically assess the contributions of "healthy leadership" constructs, models, and assessments to the leadership literature and organizational settings, respectively.

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