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The positive relationship between servant leadership and employees' psychological health: A multi-method approach**

Servant leadership is thought to encourage socially responsible and moral behaviors. In the present article, we test the positive relationship between servant leadership and employees' psychological health. We argue that servant leadership is positively related to employees' health because servant leaders shape employees' needs and create work environments that fulfill these needs. We examine the proposed relationship of servant leadership (a) competing for variance with different well-known stressors, (b) in multiple samples, (c) at the within- and between-person level, and (d) in relation to long- and short-term indicators of strain. On the basis of this multi-method approach we seek to demonstrate that our results are invariant across different methodological conditions. In Study 1 (N=443), we simultaneously tested the between-person level relationships of servant leadership and job ambiguity to emotional exhaustion and depersonalization as the core symptoms of burnout. In Study 2 (N=75), we simultaneously tested the relationships of person-level servant leadership and day-level emotional dissonance to day-level ego depletion and need for recovery as outcomes. The results of both studies demonstrate that servant leadership is negatively related to strain and accounts for unique variance in short- and long-term indicators of strain over and above that explained by well-known job-stressors. Accordingly, servant leadership can be regarded as an important determinant of employees' psychological health.

Key words: **servant leadership, strain, emotional dissonance, burnout, job ambiguity** (JEL: J24, C83, C30, I10, O15)

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The positive relationship between servant leadership and employees' psychological health: A multi-method approach

Corporate scandals (e.g. Enron, WorldCom or Anglo Irish Bank) and the unethical behaviors of leaders and employees during the current financial crisis have shaken confidence in leadership (Liden, Wayne, Zhao, & Henderson, 2008). Indeed, research has demonstrated that some leadership styles can promote unethical behaviors (e.g., Bass & Steidlmeier, 1999; Howell & Shamir, 2005; Kanungo & Mendonca, 1996; Peus, Kerschreiter, Frey, & Traut-Mattausch, 2010; Yukl, 2013). In an attempt to facilitate ethical behavior at work, the focus of leadership research has thus shifted to leadership styles that encourage socially responsible and moral behaviors such as servant leadership, ethical leadership, and authentic leadership (Avolio & Gardner, 2005; Avolio, Walumbwa, & Weber, 2009; Brown, Treviño, & Harrison, 2005).

Among other outcomes, previous research has also identified leadership as a determinant of employees' psychological health (Kuoppala, Lamminpää, Liira, & Vainio, 2008). For example, in their 2011 report, the Federal Institute for Occupational Safety and Health in Germany reported a steady decrease of work-related psychological health in the past years and predicted that in the upcoming years this trend will result in high absenteeism rates in Germany (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin [BAuA] und BMAS, 2012). Thus, from an organizational perspective, threats to employees' psychological health can be expected to account for major productivity losses in the near future. To prevent these losses, research needs to identify factors that can improve employees' psychological health.

Previous research has provided inconsistent results regarding the relationship between different leadership styles such as transformational leadership, consideration, initiating structure and employees' psychological health (e.g., Arnold, Turner, Barling, Kelloway, & McKee, 2007; Nielsen, Randall, Yarker, & Brenner, 2008; Rowold & Heinz, 2008). In addition, only a few studies have examined the relationship between leadership styles that have been argued to promote socially responsible and moral behaviors and employees' psychological health (e.g., Ilies, Morgeson, & Nahrgang, 2005). In the present study, we aim to address this lacuna in leadership research by examining the relationship between servant leadership and employees' psychological health.

Servant leadership is a leadership style that focuses on serving multiple stakeholders of the organization. Hale and Fields (2007) define servant leadership as "an understanding and practice of leadership that places the good of those led over the self-interest of the leader, emphasizing leader behaviors that focus on follower development, and de-emphasizing glorification of the leader" (p. 397). On the basis of this definition, we predict that the proposed positive relationship between servant leadership and health should become manifest in short-and long-term indicators of strain, which are thought to reflect overall employees' psychological health. These predictions are based on *organizational fit theory* (Caplan, 1983, 1987a,b) and *social identity theory* (Tajfel & Turner, 1979). Organizational fit theory proposes that psychological health arises from a high fit between employees' needs and organizational provisions and affordances. According to social identity theory, individuals define themselves as mem-

bers of groups, and thereby internalize social identities that serve to structure both organizational perceptions and behavior. Amongst other things, Haslam, Jetten, Postmes, and Haslam (2009) argue that shared social identity serves as a basis for feelings of trust, support, and belongingness — feelings that in turn are expected to improve employees' psychological health. In the present paper, we integrate both theories and propose that servant leaders can create a shared social identity among followers and thus fulfill followers' needs. Consequently, we expect servant leadership to be positively related to health because it speaks to followers' needs for a sense of shared social identity and hence provides a high needs-supply fit.

We conduct two studies to examine the proposed relationships. In Study 1, we examine whether servant leadership is negatively related to long-term indicators of job-strain (emotional exhaustion and depersonalization). In Study 2, we then examine whether servant leadership is related to short-term indicators of strain (ego depletion and need for recovery). Furthermore, we simultaneously test the relationship of servant leadership and well-known job-stressors that have been repeatedly found to predict strain. In Study 1, we include job ambiguity and in Study 2, emotional dissonance as contrasting job-stressors. In this way, we examine whether servant leadership accounts for unique variance in strain over and above that explained by these job stressors.

We believe that our research has the capacity to provide a number of contributions to the literature on leadership and health. First, it should provide initial evidence about the nature of the relationship between servant leadership and various indicators of strain. Second, it should examine whether servant leadership is related to employees' health over and above well-known job-specific stressors. Third, it will analyze the proposed relationships in multiple samples and seek to establish that the hypothesized relationships are invariant across different occupational contexts. Fourth, it examines within- and between-person level data to demonstrate that servant leadership may not only be related to individual levels of job-strain, but may also predict day-specific, intraindividual fluctuations in strain. Last but not least, in our research we examine the relationship of servant leadership on both short- and long-term indicators of strain. Testing the relationships under such varying methodological conditions should provide evidence for the generalizability of the proposed relationships.

In the following, we will first elaborate on the construct of servant leadership and distinguish it from other leadership styles. Next, we will focus on the relationship between servant leadership and employees' psychological health, and present a theoretical foundation for the proposed positive relationship. Finally, we will present the details of the present research.

Servant leadership

The previously described characteristics of servant leadership such as behaving ethically, helping followers grow and succeed, putting followers first (cf. Liden et al., 2008) reflect the fact that servant leadership focuses on multiple stakeholders of the organization such as shareholders, the community, customers, and especially followers. The core idea of servant leadership is that managers set aside their personal self-interest for the benefit of collective interests (Boyatzis & McKee, 2005; George,

2003). Thus, servant leaders do not lead for their own or their organization's benefit, but for the benefit of multiple stakeholders, and especially their employees. Consequently, servant leaders do not lead through formal authority or charisma as proposed in other leadership styles such as transformational leadership (e.g., Burns, 1978; Weber, 1921/1946), but instead rely on "one-on-one" communication to understand the abilities, needs, desires, goals, and the potential of their employees (Liden et al., 2008; p. 162). Additionally, servant leaders shape their employees' views and values to encourage them to become servants and servant leaders themselves (Greenleaf, 1977).

Even though servant leadership overlaps with other leadership styles such as transformational, ethical, and authentic leadership (Bass & Avolio, 1990; Brown & Tevino, 2006; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008), it also differs from these constructs in certain key aspects. First, Graham (1991) argues that leadership styles such as transformational leadership fail to consider the importance of a moral compass, which constitutes a crucial aspect of servant leadership. Second, in contrast to leadership styles that include a moral component (e.g., authentic leadership and ethical leadership), servant leadership focuses on the success of multiple stakeholders of the organization. Third, servant leadership is especially focused on the interests and competencies of followers. Thus, servant leaders aim to develop their employees, and to support their growth and success (Smith, Montango, & Kuzmenko, 2004).

Recent research provides strong support for the idea that servant leadership exerts unique beneficial effects on various job attitudes, fairness perceptions, and, not least, job performance. For example, Ehrhart (2004) demonstrated that servant leadership accounts for additional variance in commitment (5%), job satisfaction (7%), perceived supervisor support (4%), and procedural justice (8%) over and above leader member exchange (LMX) and transformational leadership. These results are also supported by further research that provided evidence for beneficial effects of servant leadership on employee work outcomes over and above other leadership styles (e.g. transformational leadership and LMX; (Dinh et al., 2014; Liden et al., 2008; Peterson, Galvin, & Lange, 2012; Schneider & George, 2011). In conclusion, servant leadership is characterized by unique behavioral patterns and attitudinal aspects, which are distinct from other related leadership concepts, and thus accounts for a broad spectrum of positive outcomes, even after controlling for other aspects of leadership. Yet despite its various beneficial outcomes, to the best of our knowledge, no previous studies have examined the relationship of servant leadership to employees' psychological health. This, then, is the goal of the present research.

Servant leadership and employees' psychological health

As already intimated, our predictions concerning the positive relationship between servant leadership and employees' psychological health is grounded in principles of organizational fit theory (Caplan, 1983, 1987a,b) and social identity theory (Tajfel & Turner, 1979). On the dyadic level, we argue that servant leaders create work environments that have affordances that fulfill employees' individual needs. According to organizational fit theory, a high fit between person and environment reduces strain while a low fit is expected to increase strain. In this regard, previous fit research has

identified two types of person-environment fit. The first type is commonly referred to as demands-abilities fit. It describes whether situational demands can be met by a person's abilities. The second type is referred to as needs-supply fit and relates to the match between a person's needs and provisions, and affordances in a given environment. We expect that the positive relationship between servant leadership and employees' health results primarily from a high degree of needs-supply fit.

At the same time, on a group level, we argue that a shared social identity influences employees' psychological health by creating an atmosphere of trust, support, justice, and belongingness (Haslam et al., 2009). Social identity theory suggests that in various contexts individuals define themselves as members of social groups (e.g., as 'us' family, friends, and colleagues). These social groups provide individuals with personal security and emotional bonding. At the same time though, individuals tend to experience negative psychological consequences if they lack or lose social identity (e.g., if they are rejected from groups) and positive consequences if they maintain or gain a sense of shared social identity (e.g., if they identify with groups; Haslam et al., 2009; see also Cruwys, Haslam, Dingle, Haslam, & Jetten, 2014). The core aspects of servant leadership speak to issues of social identity. For example, by promoting ethical behaviors among their followers, servant leaders establish norms that are embraced by all members of their group and followers' enactment of these norms helps to establish a shared sense of positive social identity. At the same time, followers' sense that leaders are 'doing it for us' (rather than for themselves) should help to cultivate both followership and psychological well-being (see Haslam, Reicher, & Platow, 2013).

Integrating both theories, we argue that through its focus on helping followers grow and achieve agency by acting in a manner consistent with commonly agreed views and values, servant leaders establish a shared social identity among group members. Thereby, servant leaders shape their followers' needs and help to create work-environments that fulfill these needs. For example, a servant leader may emphasize the importance of giving back to the community and induce the need to be involved in community service or volunteer activities. Then again, the servant leader may fulfill this need by introducing community service activities within corporate events. In short, we argue that the positive relationship between servant leadership and employees' psychological health reflects processes occurring at both group and dyadic levels. At the group level, it arises from feelings of trust, support, and belongingness that result from the leader's cultivation of a sense of shared social identity; at the dyadic level, it results from the leader's enhancement of needs-supply fit.

The present research

We conducted two studies to provide empirical evidence for the proposed positive relationships between servant leadership and employee's psychological health, as measured by multiple indicators of job strain. To demonstrate that servant leadership shares unique proportions of variance with indicators of strain (Hülsheger & Schewe, 2011; Jackson & Schuler, 1985; van Sell, Brief, & Schuler, 1981), we simultaneously tested servant leadership in combination with different well-known job-stressors such as job ambiguity and emotional dissonance. Job ambiguity involves a perceived lack of job-related information and reflects employees' perceptions of uncertainty concerning

various aspects of their jobs (Breaugh & Colihan, 1994). The negative impact of job ambiguity on, for example, burnout has been observed in multiple studies. Schwab and Iwanicki (1982) reported that among teachers, role conflict and job ambiguity account for considerable proportions of variance in emotional exhaustion (23%) and depersonalization (20%). Furthermore, in their meta-analysis, Lee and Ashforth (1996) found moderate to strong correlations of job ambiguity to both burnout symptoms.

Emotional labor refers to the goal-directed regulation and expression of organizationally desired emotions. Since Hochschild's (1983) seminal work, emotional labor has repeatedly been found to be a source of work stress and to cause job strain (e.g., burnout), especially when emotional dissonance is experienced (Abraham, 1998; Heuven & Bakker, 2003; Zapf & Holz, 2006). Emotional dissonance refers to the perceived discrepancy between genuinely felt and expressed emotions as required by a given job role. Indeed, a large body of evidence indicates that emotional dissonance exerts stronger effects on impaired psychological health than other components of emotional labor (e.g., Diestel & Schmidt, 2010, 2011; Hülsheger & Schewe, 2011; Zapf & Holz, 2006).

Furthermore, we test the relationship of servant leadership with different indicators of strain. We examine emotional exhaustion and depersonalization as long-term indicators of strain. Emotional exhaustion is considered to be the main component of burnout and is defined as a chronic state of depletion and fatigue resulting from one's work (Maslach & Jackson, 1981; Wright & Cropanzano, 1998). Depersonalization, another dimension of burnout, refers to negative and cynical attitudes towards people at work (Maslach & Jackson, 1981). As short-term indicators of job-strain, we examine ego depletion and need for recovery. Ego depletion refers to a momentary state of regulatory resource depletion following regulatory demands (Baumeister, Bratslavsky, Muraven, & Tice, 1998). According to resource-based conceptualizations of psychological strain (e.g., Muraven & Baumeister, 2000), ego depletion can be thought as a short-term correlate of impairments in psychological health. Need for recovery reflects the need to recuperate from work tasks that is strongest in the last hours of work and directly after work (van Veldhoven, 2003).

In sum, we examine the robustness of our hypotheses under varying methodological conditions. We test the impact of servant leadership on employee health (a) competing for variance with different well-known stressors, (b) in two samples from different occupational contexts, (c) on the between and a within-person level, and (d) on both long- and short-term indicators of strain. We argue that the proposed multimethod approach should allow us to test whether the relationship between servant leadership and strain is invariant to different boundary conditions such as individual work contexts, indicators of strain, and different levels of analysis. In Study 1, we simultaneously examine the relationship of servant leadership and job ambiguity to emotional exhaustion and depersonalization. Thus, our first hypothesis is:

H1: Servant leadership is negatively related to emotional exhaustion and depersonalization over and above job ambiguity.

The sample for this study consists of employees from a bank in Germany. In their work environment, job ambiguity constitutes one of the main stressors because em-

ployees have to balance customers' needs with organizational priorities (Chebat & Kollias, 2000). For example, even though employees need to sell financial products to customers, they also have to consider customers' interests. Thus we decided to control for job ambiguity as a stressor in this study.

In Study 2, we analyze the proposed relationship in a within-person data sample. We simultaneously test the relationship of person-level servant leadership and day-level emotional dissonance to day-level ego depletion and need for recovery. Here, then, our second hypothesis is:

H2: Servant leadership is negatively related to ego depletion and need for recovery over and above emotional dissonance.

Participants in this study were employees from the services sector who interact with clients, patients, or customers on a regular basis. This type of work is characterized by high levels of emotional labor, which in turn can cause emotional dissonance (Brotheridge & Grandey, 2002). Accordingly, in this sample we control for emotional dissonance as a typical stressor.

Study 1

Method

Participants

The sample for our first study was recruited from a major bank in Germany. All participants were contacted via e-mail and received an online survey which was completed during regular working hours. Participation was voluntary, and all participants were assured that their responses would remain confidential. Out of 705 contacted persons, we received 443 responses (63% response rate). Participants' age ranged from 18 to 60 years (M = 39.22; SD = 10.68). Of these participants, 56% were female, and 23% worked part-time.

Measures

Job ambiguity was assessed with nine items from a scale developed by Breaugh and Colihan (1994), which was translated and validated in German by Sodenkamp and Schmidt (2000). Here participants indicated their perceived lack of job-related information on a 7-point Likert-scale (1 = *not at all*, 7 = *a great deal*). Sample items are "I know how to get my work done (what procedures to use)" (work method ambiguity) and "I know when I should be doing a particular aspect (part) of my job" (scheduling ambiguity). All items were recoded so that higher scores reflect greater job ambiguity and were then averaged to a single scale score.

We used Ehrhart's (2004) scale to measure servant leadership. On the basis of a literature review, Ehrhart (1998) identified seven major categories of servant leader behaviors (forming relationships with followers, empowering followers, helping followers grow and succeed, behaving ethically, having conceptual skills, putting followers first and creating value for those outside of the organization). Afterwards, he developed two items for each category resulting in a 14-item measure of servant leadership. Factor analyses revealed that this measure had a one-dimensional structure (Ehrhart, 2004; van Dierendonck, 2011). For the present study, the items were trans-

lated into German through a three-step procedure. This involved the original items being translated into German, then back into English, and then compared. In our study, participants rated the behavior of their leader on these items using 5-point Likert-scales (1 = *not at all*, 5 = *a great deal*). Table 1 gives an overview of the original items and the German translations.

The burnout dimensions of emotional exhaustion (eight items) and depersonalization (five items) were assessed with a German version (Büssing & Perrar, 1992) of the Maslach Burnout Inventory (Maslach & Jackson, 1981, 1986). Sample items are "I feel emotionally drained from my work" (emotional exhaustion) and "I have become more callous toward people since I took this job" (depersonalization). The items were rated on a 6-point Likert-scale (1 = *not at all*, 6 = *very strong*).

Factor structure

Before testing our hypotheses, we examined whether the factor structure of our translated measurement of servant leadership resembles the factor structure of the original measurement. Thus, we conducted an exploratory factor analysis (EFA). Results of

Table 1: Servant leadership: Original items and german translations

	Original Items	German Translations
1	My department manager spends the time to form quality relationships with department employees.	Mein unmittelbarer Vorgesetzter investiert viel Zeit, um gute Beziehungen zu den Mitarbeitern aufzubauen.
2	My department manager creates a sense of community among department employees.	Mein unmittelbarer Vorgesetzter erzeugt ein Zusammengehörigkeitsgefühl unter den Mitarbeitern.
3	My department manager's decisions are influenced by department employees' input.	Mein unmittelbarer Vorgesetzter lässt sich in seinen Entscheidungen von den Ansichten der Mitarbeiter beeinflussen.
4	My department manager tries to reach consensus among department employees on important decisions.	Mein unmittelbarer Vorgesetzter versucht bei wichtigen Entscheidungen, einen Konsens unter den Mitarbeitern herzustellen.
5	My department manager is sensitive to department employees' responsibilities outside the work place.	Mein unmittelbarer Vorgesetzter nimmt auf die ausserberufliche Lebenssituation der Mitarbeiter Rücksicht.
6	My department manager makes the personal development of department employees a priority.	Für meinen unmittelbaren Vorgesetzten ist die persönliche Weiterentwicklung der Mitarbeiter ein vorrangiges Ziel.
7	My department manager holds department employees to high ethical standards.	Mein unmittelbarer Vorgesetzter hält die Mitarbeiter zur Einhaltung hoher moralischer Standards an.
8	My department manager does what she or he promises to do.	Mein unmittelbarer Vorgesetzter hält, was er verspricht.
9	My department manager balances concern for day-to-day details with projections for the future.	Mein unmittelbarer Vorgesetzter verknüpft Alltagsangelegenheiten mit langfristigen Plänen für die Zukunft.
10	My department manager displays wide-ranging knowledge and interests in finding solutions to work problems.	Mein unmittelbarer Vorgesetzter verfügt über weitreichende Kenntnisse bei der Bewältigung von Arbeitsproblemen.
11	My department manager makes me feel like I work with him/her, not for him/her.	Mein unmittelbarer Vorgesetzter gibt mir das Gefühl, dass ich mit ihm und nicht für ihn arbeite.
12	My department manager works hard at finding ways to help others be the best they can be.	Mein unmittelbarer Vorgesetzter arbeitet hart daran, andere dabei zu unterstützen, ihr Bestes zu geben.
13	My department manager encourages department employees to be involved in community service and volunteer activities outside of work.	Mein unmittelbarer Vorgesetzter ermutigt die Mitarbeiter, sich an gemeinnützigen und ehrenamtlichen Aktivitäten außerhalb der Arbeit zu beteiligen.
14	My department manager emphasizes the importance of giving back to the community.	Mein unmittelbarer Vorgesetzter betont die Notwendigkeit, für das gesellschaftliche Wohl einen Beitrag zu leisten.

the EFA (principal component analysis with orthogonal varimax rotation) provided a two-factor structure of servant leadership. The amount of variance explained by both factors was 62.7 %. The first factor includes the first 12 Items (cf. Table 1). These items reflect the prioritization of subordinates concerns. The first factor accounts for the largest proportion of variance (53.7 %). The factor loadings range from .83 to .51. Items 13 and 14 represent the second factor. This factor reflects encouragement of ethical and prosocial behavior. It accounts for 8.9 % of variance. The factor loadings range from .73 to .67. Because Costello and Osborne (2005) argue that factors with less than three items tend to be unstable, we conducted another EFA and specified the extraction of only one factor as suggested by the original scale (Ehrhart, 2004). This factor accounts for 53.7 % of the total variance. The factor loadings ranged between .83 and .51. Because the one-factor model resembled the original scale and the factor loadings did not fall below the critical value of .30 (Costello & Osborne, 2005), we decided to use a composite measure of servant leadership. Thus, as suggested by Ehrhart (2004), this involved averaging responses to all 14 servant leadership items (cf. Table 1).

Data analysis

Before testing the hypotheses, we conducted Harman's one-factor test (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) in order to analyse potential confounding effects due to common method variance. The results of this test suggested that a common method factor accounted for 31.3 % of variance. On this basis, we infer that our results are not seriously biased by high common method variance. Subsequently, we analysed our data using three-step hierarchical linear regression analyses with emotional exhaustion and depersonalization as outcomes. In Step 1, we entered the control variables age, gender, and work time into the regression to control for their potential confounding influences on the relationships under examination (Indik, Seashore, & Slesinger, 1964; Moen & Dempster-McClain, 1987). In Step 2, we introduced job ambiguity. In Step 3, servant leadership was added into the regressions.

Results

Table 2 presents the means, standard deviations, and reliabilities of study variables for the first sample.

Table 2: Means, standard deviations, internal consistencies (Cronbach's Alpha) and intercorrelations (Study 1)

Variable	1	2	3	4	5	6	7
1. Age	–						
2. Gender[a]	**.11**	–					
3. Working Time[b]	**-.19**	**.42**	–				
4. Job Ambiguity	**-.15**	.01	.04	*(.90)*			
5. Servant Leadership	-.08	.01	.05	**-.37**	*(.93)*		
6. Emotional Exhaustion	.05	.04	**.12**	**.37**	**-.37**	*(.89)*	
7. Depersonalization	-.07	**.15**	**.12**	**.37**	**-.36**	**.66**	*(.79)*
M	39.22	1.44	1.78	2.80	3.37	2.82	2.04
SD	10.68	0.50	0.42	0.95	0.76	0.98	0.81

Note. [a]Gender (1 = female, 2 = male), [b]Working Time (1 = part-time, 2 = full-time).
Internal consistency estimates (Cronbach's alpha) are in parentheses in the diagonal. Numbers in bold $p < .05$. N = 443.

H1 proposed that servant leadership is negatively related to emotional exhaustion and depersonalization over and above job ambiguity. Results of multiple regression analyses relating to this hypothesis are presented in Table 3. These indicate that, after controlling for demographic variables, job ambiguity is positively related to emotional exhaustion and depersonalization (cf. Table 3). Moreover and theoretically more important, servant leadership is negatively related to both outcomes (emotional exhaustion [$\beta = -.25$; $p < .01$] and depersonalization [$\beta = -.25$; $p < .01$]). The incremental variance explained by servant leadership was 6% for emotional exhaustion and 5% for depersonalization (cf. Table 3). These results thus support our hypothesis.

Table 3: Regression results (β Values) for Study 1

	Emotional Exhaustion			Depersonalization		
Variable	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	.08	.14*	.11	-.07	-.01	-.05
Gender	-.03	-.04	-.04*	.14	.13	.13*
Working Time	.15*	.15*	.15	.05	.05	.05
Job Ambiguity		.38*	.29*		.37*	.27*
Servant Leadership			-.25*			-.25*
$R^2(\Delta R^2)$	.01(.01)	.15(.14)	.21(.06)	.02(.02)	.16(.14)	.21(.05)
F for change in R^2	2.93*	74.44**	30.41**	4.67**	69.14**	30.32**

Note. * p < .05. ** p < .01. N = 443.

Discussion

The findings of Study 1 provide initial support for our hypothesis that servant leadership is negatively related to psychological strain (H1). Our analyses demonstrate that servant leadership accounts for additional variance in long-term indicators of strain (emotional exhaustion and depersonalization) over and above job ambiguity. Consequently, the negative relationship between servant leadership and indicators of strain was still valid even in work environments that are characterized by high job ambiguity.

Even though our first study provides clear evidence for the proposed relationships, it has several methodological weaknesses. First, the design of the study does not allow us to draw causal conclusions about the relationship of servant leadership and health. Thus, it is not clear whether servant leadership predicts strain or vice versa. Second, based on our results, we do not know whether servant leadership accounts for variance in indicators of strain over and above job-related stressors other than job ambiguity. Third, given the specific occupational context of our sample, we are left with the question of whether and to what extent the proposed relationship of servant leadership is generalizable across different samples and occupational contexts. Fourth, we do not know whether servant leadership also predicts day-level fluctuations in short-term indicators of psychological health.

To address these various limitations, we conducted a second study which aimed to substantiate the positive relationship between servant leadership and psychological health. In a diary study, we analysed whether servant leadership relates to day-level in-

dicators of strain (ego depletion and need for recovery) over and above emotional dissonance as a day-level stressor.

Study 2

Method

Participants and research design

Participants (N = 75) were recruited through announcements, individual contacts, and contacts of undergraduate management students. Out of 105 participants that took part in our survey, we received 75 responses. Thus, our response rate was 71%. Participants' age ranged from 20 to 65 (M = 41.10; SD = 13.82). The proportion of female participants was 53%, and 24% of the participants worked part-time.

The data collection included a general survey and day-specific surveys. In the general part of the survey, we assessed person-level constructs such as age, gender, working time, and servant leadership. In the day-specific part of the survey, we assessed day-specific emotional dissonance and indicators of strain (ego depletion and need for recovery). All day-specific measures were assessed in the evening after work.

Measures

Servant leadership was assessed using the same scale as in Study 1. We assessed day-specific emotional dissonance using five items that referred to the frequency of experienced discrepancies between genuinely felt emotions and those required by the job role (e.g., "In the last hours, how often did you have to show feelings at work that you do not really feel?" or "In the last hours, how often did you suppress your emotions at work"). These items were adapted from the Frankfurt Emotion Work Scales (FEWS 3.0; Zapf, Vogt, Seifert, Mertini, & Isic, 1999) and responses were made on scales ranging from 1 (*never*) to 5 (*very often*). All questions were modified for the present study by specifically referring to the actual time frame ("in the last hours").

The measurement of day-specific ego-depletion was based on five items that assessed the current experience of resource depletion and low will-power (e.g., "At the moment, I feel increasingly less able to focus on something." or "At the moment, I feel as if I have no willpower left."). The scale was originally developed and validated by Bertrams, Unger, & Dickhäuser (2011) and all items were scored on 5-point Likert-scales (1 = *not at all*, 5 = *a great deal*). Day-specific need for recovery was assessed with five items (e.g., "After the present day's work I feel so tired that I cannot get involved in other activities." or "My job causes me to feel rather exhausted."; van Veldhoven, 2003). All items were scored on the same 5-point Likert-scales.

Factor structure

Initial results of the EFA (principal component analysis with orthogonal varimax rotation) yielded a two-factor structure that was similar to Study 1. Accordingly, we conducted another EFA in which we specified the extraction of only one factor. Results demonstrated that a single factor accounted for 43.9 % of variance with factor loadings ranging from .80 to .38. Because the one-factor structure explained a substantial amount of variance and the factor loadings did not include values below the critical

threshold of .30 (Costello & Osborne, 2005), we decided to use the one-factor structure for the subsequent analyses.

Data analysis

The day-level structure of our data did not allow us to perform Harman's one-factor test for common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002) was used to analyze our data because the day-level data (level 1) were nested within the person-level data (level 2) and HLM takes into account the interdependence of both levels. We applied stepwise modeling with a random intercept and random slope (Hox, 2002; Nezlek, 2001). The null model only included the intercept. Model 1 added the person-level control variables gender, age, and working time; Model 2 included day-specific emotional dissonance; finally, Model 3 added servant leadership. When estimating the parameters in HLM, emotional dissonance was centered around the grand mean so that it could explain variance at both the between- and the within-person level. In line with the recommendations of Hofmann and Gavin (1998), servant leadership was also centered around the grand mean. Model fit is indicated by the difference in log likelihood ratio (Δ— 2*log) of the respective model compared to the previous model.

Results

Table 4 displays means, standard deviations, reliabilities, and correlations among our variables. The proportion of within-person (level-1) variance was 59.0% for ego depletion and 61.5% for need for recovery (see Tables 5 and 6). On the one hand, both short-term indicators of strain exhibited high day-specific fluctuations. On the other hand, there was also high variance between the individuals suggesting that job characteristics, such as leadership, may strongly influence the general level of day-specific fluctuations on strain.

Table 4: Means, standard deviations, internal consistencies (Cronbach's Alpha) and intercorrelations (Study 2)

Variable	1	2	3	4	5	6	7
1. Emotional Dissonance - midday	*(.97)*	**.46**	**.45**				
2. Ego Depletion - evening	**.61**	*(.92)*	**.78**				
3. Need for Recovery - evening	**.59**	**.83**	*(.94)*				
4. Servant Leadership	-.15	**-.28**	**-.25**	*(.90)*			
5. Age	-.07	-.01	.11	-.15	–		
6. Gender[a]	-.05	-.05	-.03	-.05	.00	–	
7. Working Time[b]	-.02	-.07	.01	-.08	-.05	**.57**	–
M	2.03	1.69	1.80	3.15	41.10	1.49	1.75
SD	0.81	0.47	0.52	0.80	13.82	0.50	0.43

Note. Cronbach's alpha for day-level variables are mean internal consistencies averaged over all measurement days. Correlations below the diagonal are person-level correlations (N=75). Correlations above the diagonal are day-level correlations (N=750). Numbers in bold $p < .05$. [a]Gender (1 = female, 2 = male) [b]Working Time (1 = part time, 2 = full time).

H2 proposed a negative relationship between person-level servant leadership and day-level ego depletion and need for recovery over and above day-level emotional dissonance. Tables 5 and 6 present the HLM results relating to this hypothesis. Parameter estimates show that day-specific emotional dissonance had a positive effect on day-specific ego depletion ($\gamma = 0.29$, $t = 7.69$, $p < .01$) and need for recovery ($\gamma = 0.35$, $t = 9.82$, $p < .01$). For both outcomes, Model 2 shows an improved fit compared to Model 1 as indicated by the difference in log likelihood ratio (ego depletion: Δ — 2*log = 127.74, $\Delta df = 1$, $p < .001$; need for recovery: Δ — 2*log = 155.24, $\Delta df = 1$, $p < .01$). Furthermore, we calculated the additional amounts of variance accounted for by emotional dissonance according to the formula proposed by Kreft and Leeuw (1998), and Singer (1998). Emotional dissonance accounted for additional 17.7 % of Level 1 and 41.4 % of Level 2 variance in ego depletion and additional 18.5 % of Level 1 and 51.6 % of Level 2 variance in need for recovery. Parameter estimates of Model 3 indicate that servant leadership is negatively related to both outcomes over and above emotional dissonance (ego depletion: $\gamma = -0.13$, $t = -2.11$, $p < .05$ and need for recovery: $\gamma = -0.10$, $t = -2.10$, $p < .05$). Accordingly, the differences in log likelihood ratio for ego depletion (Δ — 2*log = 4.15, $\Delta df = 1$, $p < .05$), and need for recovery (Δ — 2*log = 3.27, $\Delta df = 1$, $p < .10$) indicate an improved model fit after adding servant leadership into the model. Supporting H2, servant leadership accounted for additional proportions of variance in both outcomes (ego depletion: 6.4 % Level 2 variance and need for recovery: 7.6% Level 2 variance).

Discussion

In Study 2, we provided support for our hypothesis that servant leadership is positively related to day-level indicators of strain (ego depletion and need for recovery) over and above day-level emotional dissonance. This study complements the results of Study 1 in multiple ways. First, through the timely separation of our measurement of servant leadership and indicators of strain our results strongly suggest that servant leadership predicts strain and not vice versa. Second, we demonstrate that servant leadership relates to strain in occupational contexts that are characterized by emotional dissonance as a typical stressor in service professions. Third, our results indicate that the proposed relationships are robust in samples from different occupational contexts. Last but not least, we provide evidence that servant leadership also relates to day-level fluctuations in indicators of strain. Consequently, the results of Study 2 contribute to our understanding of the relationship between servant leadership and health.

Table 5: Multilevel estimates for models predicting ego depletion (Study 2)

	Null model			Model 1			Model 2			Model 3		
Parameter	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Intercept	1.672	0.054	31.15 **	1.939	0.229	8.46 **	1.886	0.208	9.06 **	1.940	0.224	8.64**
Gender				0.002	0.135	0.02	0.045	0.109	0.41	0.052	0.107	0.48
Age				-0.002	0.003	-0.60	-0.001	0.003	-0.40	-0.002	0.003	-0.67
Working Time				-0.107	0.145	-0.74	-0.127	0.127	-1.00	-0.140	0.124	-1.13
Emotional Dissonance							0.291	0.037	7.79 **	0.286	0.037	7.69**
Servant Leadership										-0.125	0.059	-2.11 *
– 2*log (lh)		1285.720			1284.767			1157.032			1152..885	
Diff – 2*log (lh)					0.953			127.735**			4.147*	
df					3			1			1	
Level 1 Intercept variance		0.271			0.271			0.223			0.223	
Level 2 intercept variance		0.188			0.186			0.109			0.102	

Note. Gender, Age, Working Time and Servant Leadership are person-level (Level 2) variables; all other predictor variables are day-level (Level 1) variables.
+p < .10. *p < .05. **p < .01

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Table 6: Multilevel estimates for models predicting need for recovery (Study 2)

Parameter	Null model			Model 1			Model 2			Model 3		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Intercept	1.767	0.055	32.33**	1.769	0.275	6.44**	1.733	0.237	7.32**	1.786	0.245	7.30**
Gender				-0.091	0.139	-0.66	-0.011	0.094	-0.12	-0.019	0.092	-0.21
Age				0.002	0.004	0.58	0.003	0.003	0.92	0.002	0.003	0.59
Working Time				0.027	0.163	0.17	-0.023	0.130	-0.17	-0.026	0.127	-0.20
Emotional Dissonance							0.351	0.035	9.91**	0.345	0.035	9.82**
Servant Leadership										-0.104	0.050	-2.10*
– 2*log (lh)		1371.785			1370.959			1215.722			1212.450	
Diff – 2*log (lh)					0.826			155.237**			3.272+	
df					3			1			1	
Level 1 Intercept variance		0.308			0.308			0.251			0.251	
Level 2 intercept variance		0.193			0.190			0.092			0.085	

Note. Gender, Age, Working Time and Servant Leadership are person-level (Level 2) variables; all other predictor variables are day-level (Level 1) variables.
+p < .10. *p < .05. **p < .01

General discussion

The aim of the present research was to provide evidence for the hypothesized positive relationship between servant leadership and employees' health. In Study 1, we demonstrated that servant leadership accounts for additional variance in long-term indicators of strain (emotional exhaustion and depersonalization) over and above a well-known job stressor, job ambiguity. In Study 2, we observed a negative relationship between servant leadership and day-level indicators of strain (ego depletion and need for recovery), over and above day-level emotional dissonance another well-known stressor in organizational research. These results support our claims that servant leadership is negatively related to short- and long-term indicators of strain and that it accounts for unique variance in these indicators of strain over and above job-specific stressors.

Theoretical implications

Our studies provide several important contributions to research on servant leadership. First, we know of no previous research that has examined the relationship between servant leadership and employees' psychological health. Integrating our results and previous research on servant leadership demonstrates that servant leadership does not only improve outcomes such as job attitudes and job performance (van Dierendonck, 2011), but also that these improvements may also have benefits for employees' health. This is especially important because research on other leadership styles such as transformational leadership indicates that these leadership styles are primarily beneficial for the organization or the leader regardless of potential negative consequences for employees (Barling, Christie, & Turner, 2008).

Second, our findings demonstrate that our analysis is robust under multiple methodical conditions. We demonstrated that servant leadership accounts for variance in indicators of strain over and above well-known stressors. These results indicate that the effects of servant leadership are unique. Given that the results were found among employees from different occupational and organizational contexts, our results also appear to be invariant against confounding influences of specific work environments. Additionally, we have demonstrated a positive relationship between servant leadership, and person-level long-term, and day-level short-term indicators of strain. Consequently, this relationship appears stable even when examined within different time frames (i.e., long vs. short term indictors of strain) and across different levels of analysis (between- and within-person levels). Finally, we also demonstrated that servant leadership accounts for variance in multiple indicators of strain. In sum, our multimethod approach provides a reasonably strong basis for concluding that the relationship of servant leadership and employees' psychological health is stable, robust, generalizable, and invariant when examining different indicators of strain, different employee specific work conditions, and different level of analysis.

Finally, the effects of person-level perceptions of servant leadership on day-level indicators of strain seem worthy of particular attention. In Study 2, we were able to demonstrate that day-level fluctuations of strain were influenced by servant leadership that had previously been measured at the person-level. Moreover, because of the time lag between the measurement of person-level servant leadership and day-level indicators of strain, our results appear not to be artifacts of any type of bias, but rather to

reflect the influence of servant leadership on employees' day-to-day psychological health. Furthermore, the diary design of our study may indicate a causal relationship between servant leadership and short-term indicators of strain. Specifically, the reported within-person effects of servant leadership indicate that individuals who are led by servant leaders (i.e., those who report being on the receiving end of high levels of servant leadership) report lower levels of strain. As described in our method section, we measured servant leadership before measuring day-levels of emotional dissonance and indicators of strain. This temporal separation of the measurements of our predictor and our outcomes therefore incorporates a developmental component into our data that allows us to impute a causal order to our variables. More specifically, the fact that servant leadership predicts day-specific fluctuations in indicators of strain over the course of ten working days tends to suggest that servant leadership predicts indicators of strain rather than vice versa.

Limitations and suggestions for further research

It remains the case, however, that our study also has several limitations that need to be discussed. First, our study variables were all operationalized by means of self-report. Thus, common method variance or a self-report bias might have contaminated the observed relationships (Podsakoff et al., 2003). However, in the first study, Harman's one-factor test indicated that common method influences were not a severe biasing factor in our data. Additionally, in our diary study we assessed servant leadership before assessing indicators of strain. Thus, as suggested by Sonnentag, Mojza, Demerouti, and Bakker (2012), the probability of a common method bias should be reduced through the temporal separation of our assessments. Nevertheless, future research could gain additional insights by analysing servant leadership from different perspectives such as self-reports and employee-reports.

Second, although we assumed a particular causal order of the variables, the correlational design of our research does not permit causal conclusions. Other causal directions or even reciprocal relations could be possible as well. For example, psychologically healthy employees might have made the choice to work for servant leaders. Additionally, as we suggested in our theoretical argument, shared social identity might have been a third factor that influenced both the perception of servant leadership on the part of employees as well as indicators of employees' psychological health. While we cannot rule out this possibility, the time component in our diary study strongly suggests that servant leadership predicts health and not vice versa. Furthermore, research on alternative leadership styles and health has also demonstrated the health enhancing effects of leadership (Nielsen et al., 2008). Additionally, given that we controlled for the effects of job ambiguity and emotional dissonance (as strong predictors for strain) on the relationship between servant leadership and strain alternative causal paths seem rather unlikely. However, further research should focus on disentangling the relationship between servant leadership and health. In particular, it is necessary to examine more closely the mechanisms (e.g., needs-supply fit, shared social identity; Caplan, 1987a; Haslam et al., 2009) that may account for the beneficial relationship between servant leadership and employee health.

Practical implications

The results of our study indicate that servant leadership is positively related to employees' psychological health. Thus, it appears that organizations that seek to improve the psychological health of employees should consider encouraging their leaders to lead on the basis of the principles of servant leadership. This can be achieved through leadership training and through the role modeling of servant leadership by current leaders.

More specifically, in the first instance, practitioners might design leader training programs that elaborate on the basic principles of servant leadership such as forming relationships with followers, empowering followers, helping followers grow and succeed, and behaving ethically (Ehrhart, 1998). Part of such training might also involve discussing different ethical perspectives and reflecting on how a servant leader might engage constructively with these perspectives. Another useful exercise may be to simulate and record annual appraisals of employees and evaluate these appraisals according to principles of servant leadership (e.g., appreciation of employees). Additionally, in these training programs, trainees should also learn about the benefits of servant leadership over and above other leadership styles. Indeed, such training programs can be expected to motivate participants to become servant leaders themselves in due course.

Second, research on servant leadership argues that this leadership style can be best taught by setting examples (Sendjaya & Sarros, 2002). Thus, being led by a servant leader is expected to increase the likelihood of a follower becoming a servant leader him- or herself. Accordingly, leaders should provide examples and lead in accordance with the principles of servant leadership with a view to encourage employees to follow in their footsteps. Indeed, in so far as the present evidence suggests, broad acceptance of servant leadership will have positive consequences for employees' psychological health. Thus, it appears that there is much to be gained through the transmission of this approach from one generation of leaders to the next.

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