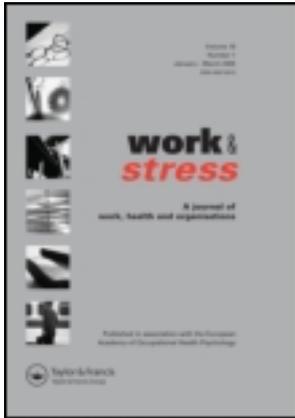


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Transformational leadership and employee psychological well-being: The mediating role of employee trust in leadership

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The relationship between employees' perceptions of their managers' transformational leadership style and employees' psychological well-being was examined in two studies. In Study 1, trust in the leader fully mediated the positive relationship between perceptions of managers' transformational leadership and employee psychological well-being in a cross-sectional sample ($n = 436$). Study 2 ($n = 269$) (1) replicated the mediated effect found in Study 1; (2) extended the model by showing that active management-by-exception and laissez-faire behaviours negatively affected employee psychological well-being by reducing trust in the manager; and (3) excluded the possibility that these results were accounted for by individual differences or liking of the manager. Theoretical and practical applications, as well as directions for future research are discussed.

Keywords: fear; management-by-exception; transactional leadership; transformational leadership; trust; well-being

Introduction

Transformational leadership theory has attracted more research attention than all other leadership theories combined (Barling, Christie, & Hopton, 2011). Although the theory has evolved over time, the current version of the theory (referred to as full range leadership theory, Avolio & Bass, 1991) comprises three major typologies of leadership. First, transformational leadership has been defined as superior leadership performance that occurs when leaders “broaden and elevate the interests of their employees, when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their own self-interest for the good of the group.” (Bass, 1990, p. 21). Second, transactional leadership focuses on the notion of transactions between the leader and subordinate. Transactional leadership includes both positive (i.e., contingent reward) and negative (i.e., management-by-exception) notions. Finally, non-transactional or laissez-faire leadership constitutes non-leadership characterized by the absence of transactions (Antonakis, Avolio, & Sivasubramaniam, 2003).

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For the most part, research on full-range leadership theory has largely been constrained within a single paradigm, one in which leadership is interesting to the extent that it enhances organizational or context-specific (Warr, 1987) outcomes. Nonetheless, the available data support the suggestion that leadership is a means of affecting employee well-being (Kelloway & Barling, 2010) and that transformational leadership, in particular, is linked to employee health (Arnold, Turner, Barling, Kelloway, & McKee, 2007; McKee, Driscoll, Kelloway, & Kelley, 2011). In the current study, we extend this literature by identifying some of the mechanisms by which this relationship might occur, controlling for the relative effects of confounding variables and negative forms of leadership on employee psychological well-being.

Theoretical background

The notion that low-quality leadership (i.e., leadership characterized by negative or unfair treatment of employees) has negative effects on employees is not new (Day & Hamblin, 1964). Research conducted on the link between leadership and employee psychological well-being, for example, has invariably focused on the deleterious effects of poor leadership, such as increased levels of employee stress and distress (e.g., Densten, 2005; Tepper, 2000), and anxiety, depression, and psychosomatic symptoms (e.g., Hoel, Rayner, & Cooper, 1999). Over-and-above its effects on psychiatric disturbance (Gilbreath & Benson, 2004), the effects of poor leadership also extend to physical outcomes such as increased blood pressure (Wager, Feldman, & Hussey, 2003), as well as sickness absenteeism and presenteeism (Nyberg, Westerlund, Magnusson Hanson, & Theorell, 2008).

Some attention has also been given to the potentially beneficial effects that leadership might exert on the psychological well-being of employees. Within a framework of positive organizational psychology, Turner, Barling, and Zacharatos (2002) offered a conceptual argument for the positive effects of transformational leadership on employee psychological well-being, while Dutton, Frost, Worline, Lilius, and Kanov (2002) provide compelling examples and research-based insights into ways in which compassionate leaders can affect the mental health of their workers.

We suggest that the components of transformational leadership as proposed by Bass and Avolio (1994) are especially relevant to employee psychological well-being. *Idealized influence* takes place when leaders choose to do what is ethical rather than what is expedient, when they are guided by their moral commitment to their followers, and go beyond self-interest for the interests of the organization. Leaders who manifest idealized influence are able to forego organizational pressures for short-term financial outcomes, and instead focus their efforts on the long-term health and well-being of their employees. Leaders exhibiting *inspirational motivation* encourage their employees to achieve more than what was once thought possible. These leaders inspire employees to surmount psychological setbacks, and instil in them the strength to tackle future hurdles. Leaders who manifest *intellectual stimulation* help employees to question their own commonly held assumptions, reframe problems, and approach matters in innovative ways. Given the opportunity to arrive at their own personal strategies to tackle psychological and work-related setbacks, employees become more confident in protecting and developing their own

well-being. At the same time, thinking about challenges in new ways enables employees to make sense of their situations. Finally, *individual consideration* occurs when leaders pay special attention to employees' needs for achievement and development; they provide needed empathy, compassion, support, and guidance that influence employees' well-being. Leaders' consideration would also foster team climates supportive of members' well-being. In doing so, leaders establish the basis for relationships within which employee development is more likely to occur.

The behaviours involved in transformational leadership influence employees at both the instrumental and symbolic levels. The instrumental value of these behaviours is readily apparent through the widespread organizational benefits that accrue to transformational leaders (Bass & Riggio, 2006; Judge & Piccolo, 2004), but leadership does not function at the instrumental level alone. Instead, leadership appeals not just to what Ashforth and Humphrey (1995, p. 111) regard as the "head", but also the "heart." Taken together, the four components of transformational leadership provide a framework for understanding what makes leaders and their style of leadership relevant to followers' psychological well-being.

Previous research on leadership and well-being (e.g., van Dierendonck, Haynes, Borrill, & Stride, 2004) has conceptualized leadership behaviours in a way that simultaneously incorporated aspects of both leadership (e.g., coaching, fairness) and management (e.g., feedback, communication), rather than the specific components of transformational leadership discussed. More recently, using cross-sectional data, Nielsen and colleagues (e.g., Nielsen, Yarker, Brenner, Randall, & Borg, 2008a; Nielsen, Yarker, Randall & Munir, 2009) have begun to explore the indirect relationships between transformational leadership and psychological well-being, along with how long these positive effects of leadership may endure (e.g., Munir, Nielsen, & Carneiro, 2010). Furthermore, subjective psychological well-being reflects employees' perceptions and evaluations of the quality of emotional and social functioning both on and off the job. For the purposes of our research, we measure constructs that characterize both context-free (Study 1) and job-related psychological health (Study 2) of an employee.

We replicate and extend previous research, in two separate studies. In Study 1, we hypothesize that:

Hypothesis 1: Transformational leadership will be positively associated with employee well-being.

Hypothesis 2: The relationship between transformational leadership and employee well-being will be mediated by employees' trust in the leader.

In Study 2, we also test these hypotheses while controlling for potentially alternative explanations that confound the relationship between transformational leadership and employee well-being. Additionally, we extend our consideration of leadership style to include non-transformational aspects of leadership. Thus we hypothesize that:

Hypothesis 3: Both management-by-exception and laissez-faire leadership will be negatively associated with employee well-being.

Hypothesis 4: The relationships of management-by-exception and laissez-faire leadership with employee well-being will be mediated by employee trust in the leader.

STUDY 1

A number of recent studies have shown that perceived work characteristics such as meaningfulness (e.g., Arnold et al., 2007; McKee et al., 2011; Nielsen et al., 2008a) and involvement (e.g., Nielsen, Randall, Yarker, & Brenner, 2008b) mediate the relationship between transformational leadership and employee well-being, with self-efficacy as a more recent addition (e.g., Nielsen et al., 2009; Nielsen & Munir, 2009). We turn our attention in this study to a different possible mediating variable, namely employee trust in leadership, which reflects an aspect of the quality of the leader-employee relationship. Consistent with Liu, Siu, and Shi (2009), we suggest that the effects of transformational leadership on employee psychological well-being will be mediated by employees' trust in leadership.

Rousseau, Sitkin, Burt, and Camerer (1998) suggest that trust in leadership is "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" (p. 395). Our hypothesis that trust in leadership mediates the relationship between transformational leadership and employee psychological well-being derives from two separate sources: first, the relationship between leadership and trust has received substantial empirical support; and second, the link between trust and psychological well-being has received more limited empirical scrutiny and is thus more theoretically driven.

A relational or social exchange process views interactions between individuals as going beyond simple economic transactions, with a higher-order relationship being concerned with the goodwill of all individuals involved. The development of such higher-order relationships will occur when leaders' intentions are perceived by followers to be positive, and their intentions and behaviours to be honest. Leaders who do so not only signal to employees the value of employees in the organization, but also convey their principles in doing the "right thing." This demonstrates the leader's interest in the well-being of employees, resulting in trust in their leader. In the case of transformational leaders, by acting as role models who consistently do what is moral and right (Turner, Barling, Epitropaki, Butcher, & Milner, 2002), and not personally beneficial, leaders develop a mutually beneficial relationship with those they lead. We argue that this relationship provides the basis on which transformational leaders gain the respect and trust of their followers.

We also posit trust as a mediator between transformational leadership and well-being because of research and theorizing about the relationship between trust in leadership and employee well-being. First, when followers believe that their leaders are capable, benevolent, and act with integrity, they would experience greater trust, and feel themselves to be less at risk of being harmed by their leaders (Mayer, Davis, & Schoorman, 1995). Thus, trust in leaders positively affects followers' psychological well-being by limiting the perceived level of risk, vulnerability, and stress – all of which could have detrimental effects on well-being (Schabracq, Winnubst, & Cooper, 1996). Additionally, followers who distrust their leaders consume their cognitive and emotional energy in attempting to safeguard themselves from these leaders, depleting their emotional and physical resources in the process. Related research demonstrates that when employees feel they can trust their leaders, they are able to focus more on both in-role and extra-role performance (Mayer & Gavin, 2005).

In the light of the above, we propose that by acting as ethical role models, being committed to employee needs, empowering and encouraging employees to think on their own, and motivating their followers to achieve more than what was thought possible, transformational leaders gain their followers' trust. In turn, employees' trust in leadership will be associated with their own well-being. By doing so, trust in leadership mediates the relationship between transformational leadership and employee psychological well-being.

Method: Study 1

Participants

The sample consisted of 436 fieldworkers (71% male) in a large Canadian telecommunications organization, who rated their first line supervisors. In all, 90 supervisors were rated by an average of 4.8 raters for each leader (range: 1–8). The mean age of participants was 40 years ($SD = 8$ years). While exact demographic data on the organization's population are not available, the predominance of male respondents and the average age of respondents are consistent with the organization's fieldworker workforce population.

Measures

Transformational leadership was measured through 20 items extracted from the Multifactorial Leadership Questionnaire (MLQ 5X; Bass & Avolio, 1997), combined to form a unidimensional reliable measure ($\alpha = .91$). Scores ranged from 0 to 16, with higher scores indicating greater levels of transformational leadership behaviours. Our decision to aggregate the four dimensions of transformational leadership into a single measure was based on two considerations. First, the four subscales of transformational leadership were highly inter-correlated (r_s ranged from .65–.77) making it difficult to identify substantively different effects of the dimensions. Second, high correlations between the four components of transformational leadership are found consistently in other studies (see Barling et al., 2010). Third, by comparing a model in which the correlations were freely estimated with a model in which the correlations were constrained to equality, we established that the correlations of each of the four dimensions of transformational leadership with trust and psychological well-being did not vary across the dimensions, $\chi^2_{\text{difference}}(6, N=436) = 6.29$, n.s.

Trust in leadership was measured with four items ($\alpha = .74$) drawn from Cook and Wall's (1980) six-item measure. Although the four items were originally designed to reflect both faith in management and confidence in the ability of management, exploratory factor analysis resulted in the identification of a single factor on which all items loaded $> .80$. Scores on the scale range from 1 to 7, with higher scores indicating more trust in leadership.

Psychological well-being was assessed with the 12-item version of the General Health Questionnaire (GHQ; Goldberg, 1972). Each of the items is measured on a four-point Likert scale ranging from 1 (not at all) to 4 (all of the time). Scores range

from 12 to 48, with higher scores indicating impaired well-being. Internal consistency of the scale was .72.

Procedure

Paper-and-pencil surveys were distributed via regular mail to the leaders, who were asked to forward surveys to up to eight of their employees. The participants returned completed surveys to the senior author via postage-paid envelopes, and were assured that their responses were confidential. Given the circumstances under which the surveys were distributed, an accurate response rate could not be calculated.

Analytical strategy

Our data were hierarchical in nature, with individuals providing ratings of shared leaders. Accordingly, we chose to examine our hypotheses at two levels of analysis. First, we operationalized our hypotheses as a cross-level direct-effect model (Kozlowski & Klein, 2000), with the effect of transformational leadership conceptualized as a level-2 variable (i.e., a group effect), and the hypothesized mediator (i.e., trust) and outcome (i.e., employee psychological well-being) conceptualized as individual (i.e., level-1) effects. Second, we also tested the relationship between leadership, trust and psychological well-being all operationalized at the individual level of analysis. Although it is most common to have multiple level-1 observations for each level-2 observation, it is possible to have only one level-1 observation (rater) as long as the number of level-2 observations is relatively large and the number of “single rater” level-2 observations is moderate (Guo & Cai, 2007). Our data meet both criteria; therefore all cases were included in the analyses.

Results: Study 1

Descriptive statistics and intercorrelations among the study variables appear in Table 1. Prior to testing the hypotheses, the aggregation of individual responses to form a group-level variable for leadership requires some justification. Accordingly, we estimated the “null” model (Heck & Thomas, 2000). The null model provides an estimate of the intraclass correlation (ICC; the partitioning of variance between and within groups), as well as a test of the statistical significance of between-group variance. In the case of transformational leadership perceptions, the ICC was .28, $p < .01$, warranting a cross-level test. Although there is evidence of a substantial

Table 1. Study 1: Descriptive statistics and intercorrelations for all study variables.

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Transformational leadership (individual)	10.42	3.14			
2. Transformational leadership (aggregated)	10.44	2.04	.66**		
3. Trust in leadership	4.95	0.86	.46**	.30**	
4. GHQ	22.30	3.94	-.14*	-.09	-.24**

Note: GHQ = General Health Questionnaire.

* $p < .05$; ** $p < .01$.

“group” effect, these findings also warrant examining the effect of leadership at the individual level of analyses. Therefore, in the subsequent analyses, both group-level and individual-level perceptions of leadership are hypothesized as predictors.

Thus, we hypothesized that trust at the individual level would mediate the relationship between transformational leadership (at both the group and the individual level) and employee psychological well-being (at the individual level). Establishing mediation in this instance requires satisfying several conditions (Baron & Kenny, 1986). First, transformational leadership at the group level has to be significantly related to well-being. Second, transformational leadership has to be statistically related to trust which, in turn, must be significantly associated with employee psychological well-being. Finally, the initial relationship between transformational leadership and employee psychological well-being should revert to zero when trust is included in the model.

Accordingly, we tested these conditions with a series of mixed model (i.e., intercept as outcomes) analyses and these results are summarized in Table 2. There was no significant effect of group-level transformational leadership on employee psychological well-being ($\beta = .03$, n.s.); nor was group-level transformational leadership associated with trust ($\beta = .01$, n.s.). Using the procedures outlined by Preacher, Zyphur, and Zhang (2010), we conducted a test of the indirect effect of leadership on employee psychological well-being. The effect was small ($\beta = .03$) and the 95% confidence interval included 0 suggesting that there was no significant indirect effect.

Individual-level leadership was associated with both well-being ($\beta = .19$, $p < .05$) and with trust ($\beta = .19$, $p < .05$), thus satisfying the first two conditions for mediation. Including trust as a predictor of well-being resulted in a significant effect for trust ($\beta = 1.04$, $p < .01$) and non-significant effects individual-level transformational leadership, thereby satisfying the third condition for mediation. To assess the indirect effect, we followed the procedures outlined by Preacher et al. (2010) for mediation in multilevel models. The indirect effect of leadership on GHQ was .16 (95% CI: .24 to .08).

Discussion: Study 1

The results of Study 1 show that employees' trust in leadership mediated the relationship between transformational leadership and employee psychological well-being. Specifically, the results supported our hypothesis that employees' trust in leadership would fully mediate the positive relationship between transformational leadership and employee psychological well-being. This mediation occurred at the

Table 2. Study 2: Results of the mixed-level analysis.

Predictor	Well-being	Trust	Well-being
Group-level transformational leadership	.03	-.01	.03
Individual-level transformational leadership	-.19*	-.13**	-.05
Trust in leadership	—	—	1.03**

* $p < .05$; ** $p < .01$.

individual rather than the *group* level of leadership, with the latter being unrelated to individual well-being.

We suggest that these results speak to the nature of leadership in organizations. First, although there was substantive agreement among employee raters, justifying aggregation to the group level, the group effect only explained 28% of the variance in leadership ratings. Correspondingly, 72% of the variance represented individual differences in the perceptions of leadership. Second, our results suggest that it is the individual level, rather than the group level, experience of leadership that is predictive of both individual trust and individual well-being. These findings suggest that it is the individual experience with a particular leader that is predictive of employee well-being rather than “objective” leadership or, more exactly, the shared perceptions of a particular leader.

Nonetheless, despite the empirical support for the model, two plausible threats to validity need to be confronted. First, construct validity would be strengthened by excluding respondents’ individual differences. Second, confidence in the role of transformational leadership will be enhanced if rival explanations (e.g., liking of the leader) can be excluded. Furthermore, our proposed model would also benefit from a deeper understanding of the effects of other components (i.e., active management-by-exception and laissez-faire leadership) of full range leadership theory (Bass & Riggio, 2006) on employee psychological well-being. We explicitly address these issues in Study 2.

STUDY 2

The results of Study 1 isolated the direct role of transformational leadership on employee psychological well-being, and identified one path (i.e., trust) through which this effect may occur. Further development of the model is warranted for several reasons.

First, a more comprehensive evaluation of transformational leadership theory requires that the model go beyond the four components of transformational leadership (Bass & Riggio, 2006) to include elements of transactional and laissez-faire leadership (Antonakis et al., 2003). Specifically, full range leadership theory also includes active management-by-exception and laissez-faire leadership. Consistent with this, Kelloway, Sivanathan, Francis, and Barling (2005) differentiated between two types of poor leadership, namely an active style of negative leadership and a more passive style, and suggest that they may exert differential effects on employee outcomes. Active management-by-exception behaviour, an aspect of transactional leadership, occurs when leaders focus their attention energetically on mistakes and errors by employees; laissez-faire leadership, one form of passive leadership, is characterized by varying levels of lack of interest and disengagement on the part of the leader. Omitting these aspects of leadership would result in a truncated model. Prior research shows that laissez-faire leadership has negative effects on employee perceptions of leadership performance and effectiveness (Hinkin & Schriesheim, 2008). In addition, transformational leadership and passive leadership exert opposite effects on safety outcomes (Kelloway, Mullen, & Francis, 2006). More specifically, laissez-faire leadership is associated with employees’ role conflict and ambiguity (Hinkin & Schriesheim, 2008), psychological distress (Skogstad,

Einarson, Torsheim, Aasland, & Hetland, 2007), and lower safety behaviours, even when exhibited in the presence of transformational leadership behaviours by the same leader (Mullen, Kelloway, & Teed, 2011).

Employees may also be distressed by a leader who evidences management-by-exception, which may be seen as abusive in some situations (Kelloway et al., 2005). Accordingly, we extend previous research (e.g., Kelloway et al., 2006) by focusing on both laissez-faire and active management-by-exception. Both styles are experienced by employees as negative. Furthermore, when researchers choose to focus only on the positive effects of transformational leadership, they ignore the consistent finding that bad events have greater power to influence relationships and emotions than do good events (Baumeister, Bratslavsky, Finkanauer, & Vohs, 2001). As a result, to obtain a comprehensive perspective on leadership and employee psychological well-being, we focus not only on the effects of high quality (transformational) leadership, but also on poor quality and negative leadership – laissez-faire passive leadership and active management-by-exception transactional leadership – on employee psychological well-being.

In line with the results of Study 1, in Study 2 we again suggest that transformational leadership affects employee psychological well-being indirectly through the mediating influence of trust in the leader. We suggest that the effect of the negative aspects of transactional leadership (active management by exception) and of passive leadership (laissez-faire leadership) on well-being will be similarly mediated by trust. We base this suggestion on the idea that low levels of trust would be promoted by leaders who are disengaged or who engage in harsh and punitive behaviours.

In the current study we also address plausible rival explanations for the relationships between perceptions of leadership style and employee well-being. First, prior research has pointed to the substantial role of employee affect in transformational leadership (Brown & Keeping, 2005). More specifically, liking of the focal leader by followers is significantly associated with perceptions of transformational leadership. To exclude this possible threat to our analyses, we statistically control for liking of the leader in Study 2. Second, there is empirical evidence that employee personality is associated with transformational leadership (Bono & Judge, 2004). As a result, we also chose to control for neuroticism, conscientiousness and extraversion as they might be associated with perceptions of transformational leadership, as well as levels of employee psychological well-being (Hetland, Sandal, & Johnsen, 2007).

Method: Study 2

For study 2, advertisements were sent to 1000 employed participants via Study Response, an on-line service designed to connect researchers to a roster of potential participants. At the time this study was conducted, Study Response maintained a roster of nearly 90,000 adults in a wide array of occupations, who were representative of the larger population of the United States (US) in terms of racial/ethnic background, education, and age. Study Response's members are not representative of the US population with respect to gender, given that approximately two-thirds of their roster are women.

The advertisement explained the nature of the present study, characteristics of the participants being sought were specified, and an electronic link to the on-line survey was provided. Once participants linked to the survey site, they re-read the same information presented in the original advertisement email. After agreeing to participate, participants were asked to connect to the questionnaire via another electronic link. Of the 328 employed individuals who responded, 269 fitted the criteria for the study and completed the survey.

Average age of the participants (151 men, 173 women) was just less than 38 years ($M = 37.9$ years, $SD = 11.0$ years), and their estimated average age of their supervisors was 43.5 years ($SD = 10.6$ years). For 15% of the sample, attending and/or completing high school was the highest level of education; 57% had attended and/or completed college, with 27% attending and/or completing graduate education. On average, respondents worked for 37.2 hours per week ($SD = 12.3$ hours per week).

We operationalized our hypotheses in a latent variable structural equation model comprising six latent variables. *Transformational leadership* was indicated by the relevant subscales of the MLQ (i.e., individualized consideration, intellectual stimulation, idealized influence and inspirational motivation: MLQ version 5X; Bass & Avolio, 1997). *Transactional leadership* was represented by the active management-by-exception and laissez-faire subscales from the same measure. Our decision to combine management-by-exception and laissez-faire into a single latent variable was based on three considerations. First, both forms of leadership are conceptually seen as negative or less effective styles. Second, we hypothesize similar effects for both variables. Finally, empirically, the scales are correlated at $r = .61$, making it difficult to estimate unique effects for the two leadership styles. Scores ranged from 1 to 5 for each of the MLQ subscales. *Trust in leadership* was measured by the 11 items from McAllister's (1995) trust scale. Scores could range from 1 to 7, with higher scores indicating more trust. *Employee psychological well-being* was indicated by the four subscales (high pleasure-high arousal, high pleasure-low arousal; low pleasure-high arousal; low pleasure-low arousal) of the Job-Related Affective Well-Being Scale (Van Katwyk, Fox, Spector, & Kelloway, 2000). Scores could range from 1 to 5 on each of the four subscales. *Liking of the leader* was indicated by three items (Brown & Keeping, 2005). Finally, *personality* was indicated by the neuroticism, conscientiousness, and extraversion subscales from the NEO Five-Factor Inventory (Costa & McCrae, 1992). All items for these latter four scales were measured on a 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree).

Results: Study 2

Descriptive statistics, reliabilities, and zero-order correlations for all study variables are presented in Table 3. The proposed measurement model provided an adequate fit to the data, [$\chi^2(105) = 221.94, p < .01$; RMSEA = .08; NFI = .95; CFI = .97].

The structural model positing that transformational and transactional leadership predicted well-being through trust (controlling for personality and liking), also provided a good fit to the data [$\chi^2(107) = 223.22, p < .01$; RMSEA = .07; NFI = .95; CFI = .97], but adding direct effects from the two leadership variables to well-being did not improve the fit of the model, data [$\chi^2_{\text{difference}}(2) = 1.28, n.s.$] and neither of

Table 3. Study 2: Descriptive statistics and intercorrelations for all study variables ($N = 269$).

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
JAWS: HPHA	3.51	0.74	(.82)														
JAWS: HPLA	3.36	0.82	.87**	(.85)													
JAWS: LPHA	3.11	0.75	.77**	.82**	(.83)												
JAWS: LPLA	3.56	0.76	.86**	.86**	.80	(.82)											
Trust	5.95	1.67	.52**	.56**	.42**	.48**	(.95)										
MLQ: IS	3.13	1.02	.47**	.49**	.39**	.43**	.75**	(.91)									
MLQ: IC	3.16	1.14	.49**	.52**	.41**	.45**	.83**	.87**	(.88)								
MLQ: IM	3.22	1.09	.49**	.51**	.43**	.45**	.66**	.82**	.81**	(.90)							
MLQ: II	3.01	1.03	.53**	.56**	.43**	.47**	.78**	.82**	.86**	.83**	(.80)						
MLQ: MBE	2.48	0.80	-.35**	-.37**	-.37**	-.37**	-.58**	-.45**	-.51**	-.38**	-.41**	(.78)					
MLQ: LF	2.12	1.00	-.35**	-.37**	-.36**	-.35**	-.66**	-.60**	-.65**	-.62**	-.61**	-.61**	(.79)				
Liking	3.81	1.21	.45**	.39**	.34**	.41**	.83**	.64**	.71**	.54**	.66**	-.54**	-.51**	(.88)			
Neuroticism	2.65	0.62	-.43**	-.42**	-.42**	-.51**	-.21**	-.23**	-.23**	-.20**	-.22**	.27**	.23**	-.21**	(.81)		
Conscientiousness	4.01	0.57	.29**	.30**	.23**	.34**	.18**	.18**	.19**	.18**	.16**	-.11	-.11	.18**	.45**	(.86)	
Extraversion	3.40	0.59	.36**	.38**	.30**	.36**	.25**	.28**	.29**	.24**	.32**	-.14*	-.09	.26**	-.40**	.45**	(.82)

Notes: Alphas are on the diagonal. JAWS = Job-Related Affective Well-Being Scale; MLQ = Multifactor Leadership Questionnaire version 5X; HPHA = High pleasure-high arousal; HPLA = High pleasure-low arousal; LPHA = Low pleasure-high arousal; LPLA = Low pleasure-low arousal; IS = Intellectual Stimulation; IC = Individualized Consideration; II = Idealized Influence; IM = Inspirational Motivation; MBE = Management By Exception; LF = Laissez Faire.

* $p < .05$; ** $p < .01$.

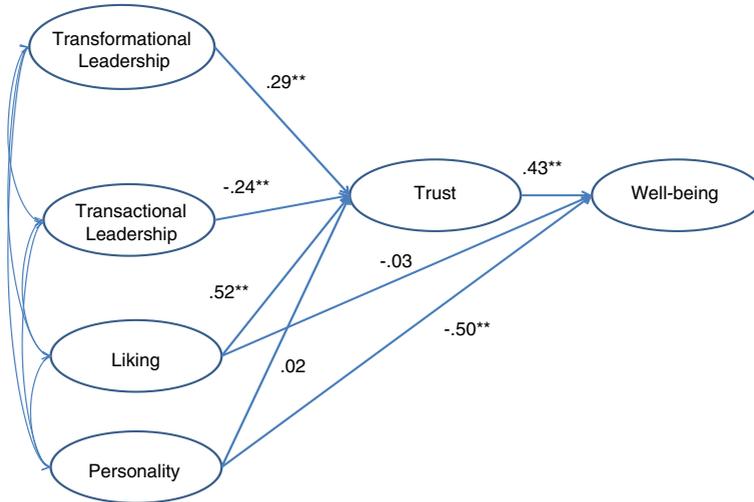


Figure 1. Study 2: Standardized parameter estimates for the structural model (Study 2).

these effects were significant. Standardized parameter estimates for the model are shown in Figure 1.

As shown, well-being was predicted by trust ($\beta = .43$, $p < .001$) which in turn was predicted by both transformational ($\beta = .29$, $p < .05$) and transactional ($\beta = .24$, $p < .001$) leadership. Well-being was also predicted by personality ($\beta = .50$, $p < .001$) but not by liking of the leader ($\beta = .03$, n.s.). In contrast, trust in leadership was predicted by liking of the leader ($\beta = .52$, $p < .001$) but not by personality ($\beta = .02$, n.s.)

Based on a bootstrap of 5000 samples, the standardized indirect effect of transformational leadership on well-being was $.13$ ($p < .02$; bias corrected 90% CI: $.04$ to $.24$) and the standardized indirect effect of transactional leadership on well-being was $.11$ ($p < .02$; bias corrected 90% CI: $.20$ to $.04$).

Discussion: Study 2

The purpose of this second study was two-fold. First, a more comprehensive understanding of the effects of transformational leadership on psychological well-being must take account of both high quality and poor leadership. Our findings showed that transactional (operationalized as management-by-exception and laissez-faire) leadership exerted opposite effects on well-being to those of than transformational leadership (via trust in leadership).

Second, based on prior research, it is critical that the effects of possible confounding variables are excluded. Thus, we controlled statistically for one relational variable (liking of the leader) as well as personality variables (neuroticism, conscientiousness, extraversion), enhancing our confidence that both transformational leadership and transactional leadership affect employee psychological well-being indirectly.

Overall discussion

The purpose of these two studies was to model the relationship between transformational leadership and employee psychological well-being. The first study identified the role of trust in the leader as a mediator of the positive relationship between transformational leadership and employee psychological well-being and suggested that the effect was at the individual respondent rather than the leader level of analysis. Study 2 replicated and extended the model by showing that other leadership styles (active management-by-exception and laissez-faire) are negatively associated with trust, which mediates the effect on well-being. This study also helped to exclude the possibility that liking of the leader and respondent personality account for a significant proportion of the variance in employee psychological well-being. Study 2 was also a constructive methodological extension of Study 1 in that it used a different measure of trust in leadership and a job-related affective well-being measure, as opposed to context-free well-being.

Taken together, these results are important for a number of reasons. First, the notion that transformational leadership exerts indirect effects on employee psychological well-being is consistent with findings relating transformational leadership to other important outcomes (Judge & Piccolo, 2004), and findings showing that perceptions of the meaningfulness of one's work mediates the relationship between transformational leadership and employee psychological well-being (e.g., Arnold et al., 2007). Second, some implications for primary promotion of employee psychological well-being ensue from these results. Specifically, it is plausible that interventions that attempt to achieve high quality leadership in the workplace might be associated not only with enhanced work performance (Barling, Weber, & Kelloway, 1996) and occupational safety (Mullen & Kelloway, 2009), but also with enhanced psychological well-being on and off the job (Kelloway & Barling, 2010).

One intriguing aspect of these findings is that the positive effect of transformational leadership on trust (.13) was of approximately the same magnitude as the negative effects of poor leadership (.11). This stands in sharp contrast to what Baumeister et al. (2001) refer to as the relentless findings that bad events are more powerful than good ones. One explanation for the departure from this enduring pattern found in close relationships (e.g., friendships, marriages) might lie in the difference in power found between leader-follower and close relationships. It is also plausible that positive leadership occurs at a higher frequency than does poor leadership, and thereby exerts a greater effect on well-being.

Like all research, the current set of studies is not without limitations. First, we rely on cross-sectional data in both studies and longitudinal analyses are required to establish temporal order (Kelloway & Francis, in press). Second, reliance on data from a single source raises the possibility that the observed relationships were inflated by common method variance. While such a bias is possible, the contaminating effects of common method variance are rendered less plausible given that the core findings were sustained across two studies. Third, despite our use of outcome variables that focused on both context-free (Study 1) and context-specific (Study 2) employee psychological well-being, the focus remains limited as a more comprehensive assessment of well-being would include its physical manifestation (e.g., blood pressure) and other positive psychological aspects (e.g., happiness, optimism, vigour).

Like all emerging fields, the field of positive organizational psychology opens many avenues for future research (Dutton & Glynn, 2008) and has particular implications for understanding employee well-being (Fullagar & Kelloway, in press). In the light of our findings and their implications, we offer several additional suggestions for further research. First, while we extended findings on the mechanisms that mediate the relationship between transformational leadership and employee psychological well-being (Arnold et al., 2007; Nielsen et al., 2008a), future research will benefit from a wider focus on other possible mechanisms such as role-breadth self-efficacy (e.g., Parker, 1998), optimism (McColl-Kennedy & Anderson, 2002) and psychological capital (Luthans, Youssef, & Avolio, 2006).

The effects of transformational leadership may also be transmitted through other behaviours enacted by leaders. For example, charismatic leaders engage in more positive emotional expression, which influences employees' mood (Bono & Ilies, 2006). This opens an additional avenue for further research aimed at understanding the process by which transformational leadership affects employee psychological well-being. In addition, consistent with Brief and Weiss' (2002) call for studies to focus on discrete emotions rather than on overall mood states, future research might also benefit from a focus on specific aspects of psychological well-being.

Lastly, future research might also investigate whether transformational leadership indirectly influences leaders' own well-being. Kelloway and Barling (2011) raised the possibility that leadership development may also result in leaders' own enhanced well-being. The authentic pride that follows from choosing to do the right thing in difficult circumstances and from taking responsibility for and ensuring the well-being of others might positively affect leaders' own well-being.

Conclusion

The results of these two studies make several important theoretical and practical contributions. First, they replicate and extend findings demonstrating the positive relationship between transformational leadership and employee psychological well-being, thereby advancing our understanding of employee-centred outcomes of transformational leadership (Bass & Riggio, 2006). Second, these studies go further by showing how such effects occur, specifically how these different types of leadership behaviour exert an effect on trust and in turn on well-being. Third, the influence of both high quality and poor leadership were examined simultaneously, enabling us to identify similar and unique effects of each. Fourth, plausible confounds (viz. liking the leader, respondent personality) were excluded. Refining and replicating these findings in subsequent research holds promise for transformational leadership development as a primary intervention aimed at enhancing psychological well-being in the workplace.

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