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The relationship between transformational leadership and engagement: Self-efficacy as a mediator

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Abstract

The present study investigated whether followers' self-efficacy mediates the relationship between a transformational leadership style and followers' engagement. 307 Czech employees evaluated the transformational leadership of their superior and their own work-related self-efficacy and work engagement. Of the 4 compared structural equation models, the model in which self-efficacy partially mediates the relationship between transformational leadership and engagement fitted best. The relationship between transformational leadership and self-efficacy showed to be weak, whereas the relationship between self-efficacy and engagement appeared to be moderately strong. A mediation analysis reported weak indirect effect of transformational leadership on engagement through self-efficacy. However, direct effect of transformational leadership on engagement was strong. Self-efficacy explained only a small portion of the relationship between transformational leadership and engagement. Current research findings expand theories explaining changes in engagement and the mechanism of how transformational leadership influences leadership outcomes.

Keywords: engagement; self-efficacy; transformational leadership; leadership; mediation

Introduction

The present study focused on followers' self-efficacy as a mediator of the relationship between a transformational leadership style and followers' engagement. In 2008, Bakker, Schaufeli, Leiter, and Taris called engagement an emerging concept. Since then, engagement has been incorporated into some of the most researchable constructs in work psychology and management. Engagement has become a hot topic probably because of its incremental value over and above other psychological constructs such as empowerment and psychological contract (e.g. Eldor & Vigoda-Gadot, 2016) and because of its connection with employee performance (e.g., Christian, Garza, & Slaughter, 2011; Yalabik, Popaitoon, Chowne, & Rayton, 2013) and well-being (e.g., Albrecht, 2010). Engaged employees often experience positive emotions and better psychological and physical health. Engaged employees create own jobs and personal resources, and transfer the engagement to others (Bakker, 2009). Furthermore, engaged employees also exhibit organizational citizenship behavior more frequently (Schantz, Alfes, Truss, & Soane, 2013).

According to Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002), work engagement is a long-term psychological state that lasts from days to weeks and can be defined as "a positive, fulfilling, work-related state of mind that is characterized by three components - vigor, dedication, and absorption" (Schaufeli et al., 2002, p. 74). *Vigor* manifests as a high level of work energy and work endurance and as determination to work hard. Vigorous people put considerable effort into their work, and try to reach goals despite facing obstacles. *Dedication* is characterized as a feeling that one's work is important and meaningful, while work is perceived as a challenge and an inspiration. Dedicated employees are excited by the job and proud of their work. *Absorption* is characterized as an experience of flow during work, when employees fully concen-

trate and cannot be easily distracted, while time seems to pass more quickly for them (Schaufeli et al., 2002). Engagement has many desirable outcomes, which is why managers are interested in the antecedents of engagement. Managers can boost the engagement of the employees by influencing the antecedents.

A leadership style is one of the most important antecedents of engagement. The leadership style most studied over the past 25 years has been transformational leadership (e.g., Avolio, 2007). Transformational leadership consists of four components that affect followers' inner motivation. The components are idealized influence (the leader emphasizes trust, ethical consequences, and important values), inspirational motivation (the leader articulates an appealing vision and is optimistic and enthusiastic), intellectual stimulation (the leader encourages the expressions of ideas, questions old assumptions, and encourages followers to participate) and individualized consideration (the leader considers individual needs, abilities and aspirations, listens to followers, and coaches and develops them; Bass, 1997). Transformational leadership has become a dominant paradigm and normative theory of leadership (Conger, 1999). Despite some recent critiques (e.g., Tourish, 2013; van Knippenberg & Sitkin, 2013), no other theory could explain leadership effectiveness better than transformational leadership does.

Transformational leadership has a positive effect on objectively measured group performance (e.g., Ling, Lubatkin, Simsek, & Veiga, 2008) and on the evaluation of leaders' effectiveness by their superiors (Lim & Ployhart, 2004), subordinates (e.g., Bycio, Hackett, & Allen, 1995; Judge & Piccolo, 2004), external evaluators (e.g., Bass, Avolio, Jung, & Berson, 2003; Lim & Ployhart, 2004) and even themselves (e.g., Ling et al., 2008). Transformational leaders strengthen leader-member exchange and have a positive impact on knowledge sharing (Li, Shang, Liu, & Xi, 2014). Moreover, transformational leaders also strengthen commitment (e.g., Top, Akdere, & Tarcan, 2015),

work satisfaction (e.g., Awamleh, Evans, & Mahate, 2005) and entrepreneurial behavior of subordinates (Afsar, Badir, Saeed, & Hafeez, 2016), and also support the work motivation (Judge & Piccolo, 2004).

Since 2009, the relationship between transformational leadership and engagement has been detected in several studies (e.g., Burch & Guarana, 2014; Hayati, Char-khabi, & Naami, 2014; Zhu, Avolio, & Walumbwa, 2009). The relationship seems to be at least partially indirect. Transformational leadership behavior may cause changes in followers' self-perception and perception of their work, which may result in higher engagement. For this reason, two studies on transformational leadership and engagement tested whether changes in engagement caused by transformational leadership were mediated by followers' self-efficacy (Salanova, Lorente, Chambel, & Martinez, 2011; Tims, Bakker, & Xanthoupoulou, 2011).

Self-efficacy is defined as individuals' persuasion of their ability to reach goals and to feel in control of events that influence them on the daily basis (Bandura, 1994). Self-efficacy influences how people feel, think and behave, and what motivates them (Bandura, 1994). Self-efficacy also relates to the work performance (e.g., Barling & Beattie, 2008). Transformational leadership moderately strengthens followers' self-efficacy (Dvir, Eden, Avolio, & Shamir, 2002; Kark, Shamir, & Chen, 2003), and self-efficacy mediates the relationship between transformational leadership and leadership outcomes such as employees' well-being (Liu, Siu, & Shi, 2010; Nielsen, Yarker, Randall, & Munir, 2009), commitment (Pillai & Williams, 2004) and performance (Walumbwa & Hartnell, 2011). Current research supposed that transformational leadership affects self-efficacy in three of four possible ways described by Bandura (1995). According to Bandura (1995), the most important source of robust self-efficacy is *mastership experience*, which refers to a person's perceived skillfulness in a certain area. A

transformational leader, on account of individualized consideration, seeks proper activities which suit each follower best, and enable them to be successful. Moreover, a transformational leader coaches and develops followers, which increases their skill level. A part of inspirational motivation is the expression of a positive attitude. Thus, the transformational leaders' followers receive more positive feedback on what they have successfully accomplished, which leads to the mastery experience.

According to Bandura (1995), the second way of developing self-efficacy is through *vicarious experience*. Vicarious experience has the greatest effect in situations, when people see others who are similar succeeding as a result of sustained exertion and hard work. The part of inspirational motivation is the role-modeling behavior of transformational leaders, who have beliefs in a vision and effort to achieve the vision. Transformational leaders lead by example, allowing them to make the vicarious experience available.

The third way to develop self-efficacy is through *social persuading*. Individuals being systematically persuaded of their skills, abilities and potential to achieve success tend to have higher self-efficacy. Through idealized influence, transformational leaders give followers a reason to trust in their future success. Through intellectual stimulation, leaders ask followers to share their ideas and use skills and abilities to solve problems. Intellectually stimulating leaders display trust in followers' abilities and foster their self-confidence.

Therefore, transformational leadership strengthens self-efficacy, which can in turn strengthen followers' engagement. Individuals with higher self-efficacy choose more challenging goals, put more effort into reaching goals and persist in fulfilling goals despite obstacles (Bandura, 1995). Such behavior indicates higher engagement. Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) found support for the self-

efficacy-engagement connection in a sample of employees of six divisions of an electronics company in The Netherlands. Carter et al. (2016) reported medium strong link between self-efficacy and engagement in the longitudinal study in an Australian financial services organization. Linnenbrink and Pintrich (2003) confirmed that self-efficacy supports engagement in school environment.

Two of the aforementioned studies focused on self-efficacy as a mediator in the relationship between transformational leadership and engagement. The first study supported the mediation hypothesis on a sample of 280 nurses (Salanova et al., 2011). However, the authors tested mediation according to an original approach recommended by Baron and Kenny (1986), without testing the significance of a mediation effect or computing the effect size of the mediation. Another study by Tims et al. (2011) was a diary study conducted on 45 consultants. The consultants rated their self-efficacy and engagement daily, and assessed the transformational leadership behavior of their leaders. The authors rejected the mediation hypothesis because day-level transformational leadership did not predict day-level self-efficacy. However, the relationship between transformational leadership and self-efficacy was supported by many other studies (see above). The results of Tims et al.'s (2011) study need to be interpreted in the context of the sample size and the power of the statistical tests. The authors reported a statistically insignificant ($r = .26$) relationship between day-level transformational leadership and day-level self-efficacy, whereas a moderately strong ($r = .27$) but statistically insignificant relationship was shown between trait transformational leadership and trait self-efficacy. The strength of the relationship between transformational leadership and self-efficacy was comparable to the other studies which found a statistically significant relationship between transformational leadership and self-efficacy (e.g., Dvir et al., 2002; Kark et al., 2003; Liu et al., 2010; Nielsen et al., 2009). In study conducted by Tims et

al. (2011), relatively strong relationships should have been manifested ($r > .30$) to support the hypothesis at a 5% significance level. Thus, the authors did not support the mediation hypothesis, but were not able to do so because of the sample size.

Further studies are needed to examine the relationships among transformational leadership, self-efficacy and engagement. The current study (i) had a sufficiently large sample to manifest the presumed weak to mildly strong relationship between transformational leadership and self-efficacy and to test the mediating hypothesis, (ii) included a significance test of the indirect effect and assesses its effect size, and (iii) contained a sample that is different from a specific sample of nurses. Thus, the current study supplemented previous studies and helped determine more clearly whether self-efficacy mediates the relationship between transformational leadership and engagement. It was hypothesized that followers' self-efficacy mediates the relationship between transformational leadership and followers' engagement.

It was assumed that self-efficacy mediates the relationship between transformational leadership and engagement, but only partially. According to previous research findings, the correlations between transformational leadership and self-efficacy and between self-efficacy and engagement (i.e., indirect effect) are distinctly weaker than the relatively strong correlation between transformational leadership and engagement (i.e., total effect; e.g., Salanova et al., 2011; Tims et al., 2011). The direct effect of transformational leadership on engagement can be explained by Kahn's theory (1990) which was verified by May, Gilson, and Harter (2004). Kahn's theory assumes that high engagement is contingent on three conditions: *psychological meaningfulness*, *psychological safety* and *psychological availability*. By psychological meaningfulness, Kahn (1990) referred to employees' feeling that the work tasks are meaningful and the effort put into work tasks is worthwhile. Employees' engagement is also influenced by psy-

chological safety - the extent to which employees' can work without fear of negative consequences. By psychological availability, Kahn (1990) referred to workers' persuasion when psychological, emotional and physical resources are used to perform employees' work tasks. Transformational leaders create psychological meaningfulness by setting meaningful visions (i.e., inspirational motivation) and by enabling the fulfillment of followers' needs and ambitions (i.e., individualized consideration). Transformational leaders support psychological safety through consistent and ethical behavior (i.e., idealized influence) and through concerns about followers' needs (i.e., individualized consideration). The condition of psychological availability is Kahn's only condition of engagement, which is influenced by transformational leadership through followers' self-efficacy.

Method

Participants

Participants of working-age population in the Czech Republic were contacted via email and Facebook to complete an online questionnaire and forward it to their acquaintances. The questionnaire addressed engagement, self-efficacy, and transformational leadership of the participants' leaders. Several demographical items were added due to the convenient sampling procedure. The final sample consisted of 307 followers aged from 19 to 65 years ($M = 31.59$, $Med = 27$), with more women than men. Almost half of the sample comprised participants with short work experience within the organization (45.3 % had been in their organization for 2 years or less). Respondents' highest education achieved was above average in comparison to Czech population (Czech Statistical Office, 2010). The leaders assessed by respondents had led 23.71 workers on average ($SD = 48.85$). Detailed characteristics are shown in Table 1.

Table 1. Descriptive statistics of the sample

Socio-demographic variables	Frequency	Percentage
Gender		
Male	107	34.9 %
Female	198	64.5 %
Education		
Elementary	1	0.3 %
Secondary education with apprenticeship certificate	9	2.9 %
Upper secondary	95	30.9 %
Higher professional	8	2.6 %
Higher - university	193	62.9 %
Marital status		
Widowed	3	1 %
Divorced	18	5.9 %
Single	191	62.2 %
Married	93	30.3 %
Employment		
Administrative staff	48	15.6 %
Plant and machine operators	11	3.6 %
Contractors	8	2.6 %
Unqualified workers	3	1 %
Sales and services workers	54	17.6 %
Army members	6	2 %
Craftsmen	4	1.3 %
Highly qualified specialists	91	29.6 %
Scientists	49	16 %
Managers	28	9.1 %
Experience on the current position		
0 – 2 years	139	45.3 %
3 – 5 years	62	20.2 %
6 – 8 years	25	8.1 %
9 or more years	55	17.9 %
Experience within the organization		
0 – 2 years	153	49.8 %
3 – 5 years	54	17.6 %
6 – 8 years	25	8.2 %
9 or more years	49	16 %
Work hours per week		
Less than 30	51	16.6 %
30 – 39	32	10.4 %
40 – 49	175	57 %
50 or more hours	42	13.7 %

Note. If the sum is not 100 %, it is because of rounding or because some respondents did not state that information.

Measures and Materials

Engagement. Standardized Czech translation of the 9-item Utrecht Work Engagement Scale (UWES; Schaufeli, 2015; Schaufeli & Bakker, 2003) was used to measure work commitment. The UWES is currently the most used and quoted engagement questionnaire (e.g., Hayati et al., 2014; Salanova et al., 2011) and consists of three subscales (vigor, dedication, and absorption) which strongly correlate. The subscales can be combined to obtain an overall score of engagement (Bakker et al., 2008).

Self-efficacy. Standardized Czech translation (Křivohlavý, Schwarzer, & Jerusalem, 1993) of the 10-item self-efficacy scale (Schwarzer & Jerusalem, 1995) was used to measure work-related self-efficacy. The original self-efficacy scale measures general self-efficacy across various life situations and tasks. However, Bandura's original concept defined self-efficacy as a task-specific construct whose level varies across different situations (Wood & Bandura, 1989). To measure specific work-related self-efficacy, the introductory instructions of the questionnaire were adjusted so that respondents could provide with the responses in the context of their current work position. Tims et al. (2011) chose a similar approach when measuring day-level work-related self-efficacy.

Transformational leadership. The 16-item transformational leadership scale from the Czech Leadership Questionnaire (Procházka, Vaculík, & Smutný, 2016) was used to ask the respondents to assess leaders' transformational approach. The scale is divided into four subscales: Idealized Influence (e.g., the leader takes responsibility for the performance of the entire group), Inspirational Motivation (e.g., the leader talks about the team's future in an optimistic way), Intellectual Stimulation (the leader asks subordinates for their own ideas) and Individualized Consideration (e.g., the leader asks subordinates about their needs). The subscales correlate with each other strongly and

can be combined into one scale of transformational leadership. The Czech Leadership Questionnaire includes 4 other subscales (Contingent Rewards, Active Management by Exception, Passive Management by Exception, and Laissez-faire Leadership) which were not included in the current research. Procházka, Vaculík, and Smutný (2016) reported a good fit ($N = 1.093$; $\chi^2(436) = 1479$; $CFI = .96$; $RMSEA = .05$) of the complete questionnaire, and a strong correlation between the transformational leadership scale in the Czech Leadership Questionnaire and the transformational leadership scale in the Multifactor Leadership Questionnaire (MLQ; $r = .89$).

Results

Preliminary analyses

The transformational leadership, self-efficacy and engagement scales were internally consistent with Cronbach's alphas above .88 (Transformational Leadership = .96; Self-efficacy = .88; Engagement = .92). Preliminary confirmatory factor analyses with MLR estimator in MPLUS 6.1 (Muthén & Muthén, 1998-2011) showed good fit of transformational leadership scale (model with 4 sub-factors and 1 second order factor Transformational leadership: $\chi^2(100) = 221.3$; $CFI = .96$; $RMSEA = .06$; std. factor loadings > .75). Self-efficacy scale (model with 1 factor Self-efficacy: $\chi^2(35) = 136.6$; $CFI = .90$; $RMSEA = .10$; std. factor loadings > .42) and Engagement scale (model with 3 sub-factors and 1 second order factor Engagement: $\chi^2(24) = 99.2$; $CFI = .94$; $RMSEA = .10$; std. factor loadings > .61) did not have satisfactory fit. However, the factor loadings of all indicators were high. The insufficient fit was caused mainly by correlated errors between individual indicators. The correlated errors and high factor loadings were one of the reasons for creating parcels (see below).

Before the hypotheses testing, the relationships between demographics (gender, university education) and transformational leadership, self-efficacy and engagement were investigated. The relationships were close to zero or very small. The respondents with university degree ($r = .14$; $p = .02$) and women ($r = .11$; $p = .05$) were slightly more engaged. University education and gender were also tested as possible moderators of the relationships between transformational leadership, self-efficacy and engagement. None of the 6 possible moderation effects were significant. The demographics were not included in tested models because their effects were marginal and because there was not sufficient theoretical support for their inclusion.

Mediation model

The relationship between transformational leadership and engagement was modeled as mediated by followers' work related self-efficacy. The structural equation model (SEM) using Mplus 6.1 (Muthén & Muthén, 1998-2011) was estimated. Before conducting the SEM analysis, parcels were formed for each of the variables because the use of parcels reduces the number of variables in a model and increases the reliability of indicators. Four parcels were created from the items of the transformational leadership scale in accordance with the four dimensions of transformational leadership (II – Idealized Influence, IM – Inspirational Motivation, IS – Intellectual Stimulation, IC – Individualized Consideration). The parcels were indicators of the latent predictor variable Transformational Leadership (TL). 10 items from self-efficacy scale were grouped randomly (in line with recommendation by Little, Cunningham, Shahar, & Widaman, 2002) into 5 parcels with 2 items each, the parcels were indicators of the latent mediating variable Self-efficacy (S-E). 3 parcels were formed from the items of the UWES in accordance

with the 3 dimensions of the scale (V – Vigor, D – Dedication, A – Absorption), these parcels were indicators of the latent outcome variable Engagement (E).

The means, standard deviations and correlations for all variables are shown in Table 2.

Table 2. Descriptive statistics and correlations

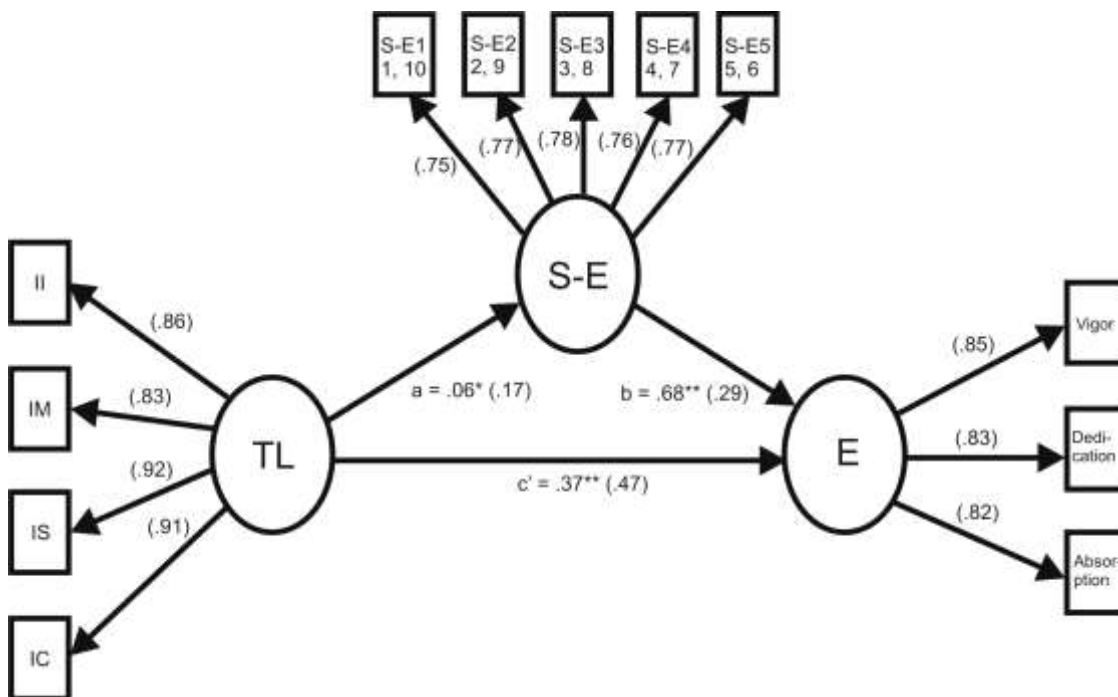
		<i>M</i>	<i>SD</i>	II	IM	IS	IC	V	D	A	S-E1	S-E2	S-E3	S-E4
Transformational leadership	Idealized influence	4.92	1.50											
	Inspirational motiv.	5.06	1.50	.71**										
	Intellectual stimulation	4.95	1.58	.77**	.77**									
	Indiv. consideration	4.30	1.72	.80**	.74**	.84**								
Engagement	Vigor	4.28	1.18	.41**	.47**	.43**	.42**							
	Dedication	4.76	1.46	.35**	.43**	.43**	.36**	.70**						
	Absorption	4.65	1.31	.33**	.36**	.37**	.30**	.69**	.70**					
Self-efficacy	Self-efficacy 1	3.22	0.57	.22**	.14*	.14*	.12*	.27**	.23**	.30**				
	Self-efficacy 2	2.99	0.62	.14*	.12*	.10	.08	.25**	.19**	.25**	.59**			
	Self-efficacy 3	2.82	0.61	.18**	.18*	.12*	.12*	.25**	.19**	.22**	.57**	.60**		
	Self-efficacy 4	2.95	0.63	.16**	.12*	.12*	.11	.26**	.16**	.28**	.61**	.58**	.56**	
	Self-efficacy 5	2.99	0.74	.11	.12*	.05	.06	.29**	.22**	.23**	.52**	.58**	.64**	.59**

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

The model with maximum likelihood estimation with robust standard errors and mean (MLMV) was estimated using the listwise deletion (the number of missing values was fairly low: .003 %). The fit indices for the hypothesized model indicated a good fit ($\chi^2(51) = 72.6$; $CFI = .987$; $TLI = .984$; $SRMR = .033$; $RMSEA = .037$), according to Hu and Bentler (1999). The path coefficients are shown in Fig. 1. All factor loadings for each scale indicator, the error variances and the path coefficients between the latent constructs were significant at a 5% significance level. There was a significant weak path from leaders' transformational leadership to followers' work-related self-efficacy and a significant strong direct path from transformational leadership to followers' work engagement. Self-efficacy was a moderately strong predictor of engagement. As shown in

Table 3, followers' self-efficacy partially mediated the relationship between leaders' transformational leadership and followers' engagement. The total effect of transformational leadership on engagement was .41, the indirect effect was .04, the ratio of the indirect effect to the direct effect was .11 (Hayes, Preacher, & Myers, 2011), and the standardized κ^2 was .057, which indicated a small mediation effect (Preacher & Kelley, 2011). Thus, support was found for the hypothesis that self-efficacy mediates the relationship between transformational leadership and engagement.

Figure 1. The mediation model of transformational leadership, self-efficacy and engagement



Notes. * $p < .05$; ** $p < .01$; standardized coefficients are in parentheses.

Table 3. Path coefficients and indirect effect for the structural equation model

	Path Coefficients						Indirect Effect		
	to E	S.E.	95% CI	to S-E	S.E.	95% CI	Estimate	S.E.	95% CI
from TL	.37** (.47)	.05	.28, .37	.06* (.17)	.02	.02, .10			
from S-E	.68** (.29)	.14	.45, .92						
TL→S-E→E							.04* (.05)	.02	.01, .07

Notes. * $p < .05$; ** $p < .01$; standardized coefficients are in parentheses; 95% CI is 95% bootstrap confidence interval (5000 bootstrap samples).

Alternative models

The hypothesized model was also compared with three alternative models. As shown in Table 4, the baseline model (M0: with three latent variables not correlating with each other, i.e., Transformational Leadership, Self-efficacy, and Engagement) fitted the data poorly ($CFI < .95$; $RMSEA > .05$). Against this baseline model, two other models were tested. Model 1 included two independent predictors of engagement (without an indirect effect of transformational leadership on engagement through self-efficacy). Model 2 was a model with a full mediation (without a direct path from transformational leadership to engagement). Both alternative models had a significantly better fit in comparison to the baseline model. However, the best model was the model in which self-efficacy partially mediated the relationship between transformational leadership and engagement (M3; with both direct and indirect effects). The model fitted the data significantly better than all other tested models.

Table 4. Comparison of structural equation models

Model	χ^2	df	$\Delta\chi^2$	CFI	RMSEA	TLI	SRMR
M0: TL, S-E, E	156.7**	54		.940	.079	.926	.184
M1: TL \rightarrow E; S-E \rightarrow E	78.3*	52	M0-M1=78.4**	.985	.041	.980	.071
M2: TL \rightarrow S-E \rightarrow E	124.4**	52	M0-M2=32.3**	.957	.067	.946	.125
M3: TL \rightarrow S-E \rightarrow E; TL \rightarrow E	72.6*	51	M1-M3=5.7**; M2-M3=51.8**	.987	.037	.984	.033

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

Discussion and conclusions

The present study investigated whether transformational leadership has a positive effect on employees' work engagement through the enhancement of employees' work-related self-efficacy. The results supported the hypothesized mediation model. The model with partial mediation explained the data better than the model without mediation and the model with full mediation. The mediation effect was small, though. Transformational leadership was related to engagement not only through self-efficacy, but directly as well. The cause of the small mediation effect was the weak relationship between transformational leadership and self-efficacy, in comparison to the strong relationship between transformational leadership and engagement. The weak relationship between transformational leadership and self-efficacy was expected in accordance with previous research findings (e.g., Dvir et al., 2002; Kark et al., 2003; Liu et al., 2010). Although transformational leadership may influence three of four ways of self-efficacy change (Bandura, 1995), there is still a wide range of other factors affecting self-efficacy. For instance, colleagues, feedback from customers, objective work performance or personal failures cause variability in individuals' work-related self-efficacy. The level of work-related self-efficacy may also be influenced by previous work experience under another leader.

As mentioned, Kahn's (1990) set of conditions for engagement change may explain the strong direct effect of transformational leadership on work-related self-efficacy. Transformational leaders directly affect conditions called psychological meaningfulness and psychological safety, without the need for influencing followers' personal characteristics. The relationship between transformational leadership and engagement may also be conveyed by mediators other than self-efficacy. Tims et al. (2011) confirmed that followers' optimism partially mediates the relationship between transforma-

tional leadership and engagement. Xanthopoulou et al. (2007) proposed self-esteem as a moderator in addition to self-efficacy and optimism.

The current study contributed by clarifying the relationships among transformational leadership, self-efficacy and engagement, which were studied by two previous studies producing conflicting results (Salanova et al., 2011; Tims et al., 2011). The present study provided evidence for the mediation role of self-efficacy and supported the assumption that the insignificant mediation reported by Tims et al. (2011) was likely caused by the weak test power and/or by chance. Furthermore, with a different and more heterogeneous sample, the study expanded the findings of Salanova et al. (2011), which were based on highly specific sample of nurses. The current research went one step further than Salanova et al. (2011) by testing the significance of mediation effect and computing the effect size. Salanova et al.'s (2011) results were complemented with findings that the mediation effect is small and that transformational leadership affects engagement predominantly through ways other than self-efficacy. Further research may look for other ways of how transformational leadership influences engagement.

Limitations

The main limitation of the present study was the use of self-reports for self-efficacy and engagement measurement and the use of followers as a common source of data for all three variables. Therefore, self-assessment error could bias the measurement of self-efficacy and engagement, and common method variance could bias the observed relationships. However, the effect size of the relationships between the observed variables was comparable to the past studies which used different methods (Tims et al., 2011; Zhu et al., 2009). Using a common source of data is typical for similar studies (e.g., Liu et al., 2010; Nielsen et al., 2009; Pillai & Williams, 2004; Rich et al., 2010) due to the difficulty in obtaining access to alternative data sources in hundreds of different teams

or organizations. Potential biases could be reduced in future research by measuring engagement through the observations of a trained observer or through the evaluation of superiors. To measure transformational leadership, it would also be possible to use a trained observer or to integrate evaluations from more subordinates.

The data were obtained from various followers from different types of Czech organizations. Young and more educated respondents predominated. However, there is a lack of research evidence on age and education affecting the relationships between the observed variables or the mediation role of self-efficacy in the relationship between transformational leadership and engagement. The sample of this study was not sufficiently representative to test the hypotheses about the influence of demographic variables. However, the preliminary analyses did not imply significant effects of education on transformational leadership, self-efficacy, engagement and their relationships. Nevertheless, future research on more heterogeneous sample or on less educated and older population is recommended in order to better generalize the results.

Practical implications

The current study emphasized the importance of employees' work-related self-efficacy for their work engagement. According to the research findings, employees with a lower level of self-efficacy seem to be less engaged, resulting in lower performance and negative influence on their colleagues (Bakker, 2009). The current research showed that it is possible to slightly increase the employees' work-related self-efficacy through transformational leadership. Transformational leadership is an important factor for enhancing employees' engagement not only through self-efficacy, but also directly. One possible recommendation could be developing transformational leadership in managers looking for ways to strengthen the engagement of their employees. Transformational leadership can be developed easily (e.g. Kelloway, Barling, & Helleur, 2000) and has other

positive consequences, such as employees' creativity (Gumusluoglu & Ilsev, 2009) and empowerment (Jung & Sosik, 2002). Barling, Weber and Kelloway (1996) introduced the transformational leadership training that contained one-day group session and four individual booster sessions with feedback and consultations. Abrell et al. (2011) described the program of transformational leadership development based on leadership feedback, training, and coaching. The authors found empirical support for the influence of these programs on leadership outcomes (Abrell et al., 2011; Barling, Weber, & Kelloway, 1996).

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