

The mediating role of teachers' emotions and burnout in explaining the relationship between perceived principal support and work engagement: testing the structural equivalence across educational levels*

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Students deserve great teachers. And teachers deserve the support they need to become great. (Bill Gates)

Work engagement - positive, fulfilling, work-related state of mind that is characterized by three components: (1) **vigor** (high levels of energy and mental resilience while working, willingness to invest time and effort in the job, and persistence even in the face of difficulties), (2) **dedication** (being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge), and (3) **absorption** (being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work) (Schaufeli & Bakker, 2003; Schaufeli, Taris, & Van Rhenen, 2008; Schaufeli & Bakker, 2010).

One of the important resources of work engagement in general is **support from supervisor** for general work population (Schaufeli & Bakker, 2003), i.e. **principal's support** for teachers (Brackett et al., 2010; Hakanen, Bakker & Schaufeli, 2006). Principal has a crucial role in ensuring environmental resources and autonomy to teachers, as well as in creating positive and supporting school climate, which affects work engagement in teachers.

In present study we focused on **teachers' emotions** and **burnout** as we considered that their underlying affective processes have the central (mediating) role in the relationship between perceived principal support and work engagement. Affective processes thus are here seen as the possible outcome of perceived principal support, as well as the antecedent of work engagement.

Although emotions are integral part of teachers' job and professional lives, teachers' emotions are relatively new research field (Nias, 1996; Sutton & Wheatley, 2003), and knowledge about influence on teachers' positive emotions on work engagement is limited. Therefore, we focused on **positive emotions** as possible mediator of the link between principal's support and engagement in teachers. We focused on **positive emotions in relation to students (joy and pride)** - since interactions with students are regarded as the most powerful in evoking emotions (Sutton & Wheatley, 2003), and we considered them as facilitating factor of work engagement in teachers. Contrary, we considered burnout as disturbing factor of work engagement in teachers. We focused here on two core components of burnout: **exhaustion** and **disengagement** (Demerouti, Bakker, Vardakou & Kantas, 2003; Demerouti & Bekker, 2008). *Exhaustion* is defined as a consequence of intensive physical, affective and cognitive strain, while *disengagement* refers to distancing oneself from one's work in general (Demerouti, Mostert & Bakker, 2010).

Research problems:

- 1) To test the mediating role of teachers' emotions and burnout in explaining the relationship between perceived principal support and work engagement.
- 2) To test the structural equivalence, i.e. causal structure, of the hypothesized model across two educational levels - lower and upper level of primary education (i.e. class teachers and subject teachers).

Hypothesis:

- 1) We hypothesized that positive emotions and burnout would fully mediate the relationship between perceived principal support and work engagement, i.e. that perceived principal support is associated to work engagement only indirectly via positive emotions and burnout. Moreover, we expected that higher levels of perceived principal support would predict higher levels of positive emotions and lower levels of burnout. Also, higher levels of work engagement would be predicted by higher levels of positive emotions and lower levels of burnout. Finally, we also expected that emotions would partially mediate the relationship between principal support and burnout.
- 2) It is expected that structural paths between variables in the model would be equivalent across samples of class teachers and subject teachers, i.e. the hypothesized model would demonstrate sufficient robustness across two educational levels.

SUBJECTS and PROCEDURE

The survey study was conducted in 2015 on the samples of 868 class teachers ($M_{age}=42.2$, $SD_{age}=10.1$; 821 female) and 1057 subject teachers ($M_{age}=41.2$, $SD_{age}=10.3$; 862 female) from 104 different primary schools in Croatia. Participation in the study was voluntary and anonymous.

INSTRUMENTS

- **Supervisor Trust and Support Scale** (Jones & James, 1979) for **perceived principal support** (7 items, $\alpha=.78$)
- **Teacher Emotions Questionnaire** (TEQ, Burić, Slišković & Macuka, 2016) for emotions related to students: **joy** (5 items, $\alpha=.85$ and **pride** (6 items, $\alpha=.86$)
- **Oldenburg Burnout Inventory** (OLBI, Demerouti & Bakker, 2008) for **exhaustion** (8 items, $\alpha=.83$) and **disengagement** (8 items, $\alpha=.75$).
- **Utrecht Work Engagement Scale** (UWES, Schaufeli & Bakker, 2003; 2010) for **vigor** (6 items, $\alpha=.90$), **dedication** (5 items, $\alpha=.82$) and **absorption** (6 items, $\alpha=.81$).

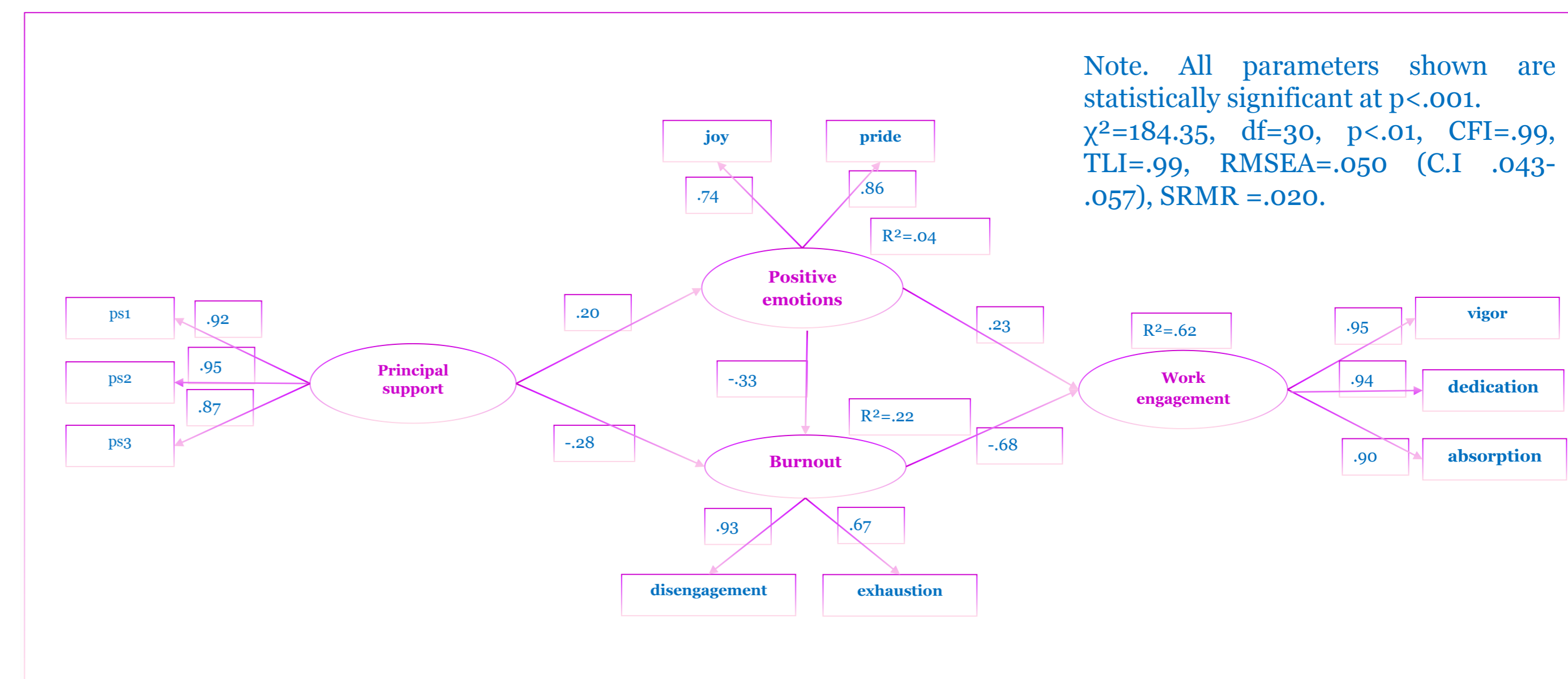
RESULTS

Descriptive statistics for all measures, and correlations between used measures are reported in Table 1. In order to answer the research questions, structural equation modelling was applied. All analyses were conducted using Mplus 6.0 (Muthen & Muthen, 2014), and the maximum likelihood estimation method. Results from testing hypothesized model by SEM is shown at Figure 2. Results of testing structural equivalence across two educational levels are shown in Table 2.

Table 1. Descriptive statistics and Pearson correlation coefficients between examined variables

	Principal support	Joy	Pride	Disengagement	Exhaustion	Vigor	Dedication	Absorption
Principal support	-	.18**	.15**	-.29**	-.22**	.25**	.24**	.21**
Joy		-	.63**	-.27**	-.12**	.34**	.33**	.32**
Pride			-	-.33**	-.15**	.43**	.38**	.38**
Disengagement				-	.66**	-.69**	-.67**	-.60**
Exhaustion					-	-.51**	-.53**	-.46**
Vigor						-	.90**	.86**
Dedication							-	.85**
Absorption								-
M	3.74	4.75	4.46	1.99	2.22	4.69	4.78	4.59
SD	.65	.37	.51	.46	.50	.91	.83	.84
α	.78	.85	.86	.75	.83	.90	.82	.81

Note: N=1925, **p<.01



Note. All parameters shown are statistically significant at $p<.001$. $\chi^2=184.35$, $df=30$, $p<.01$, CFI=.99, TLI=.99, RMSEA=.050 (C.I. .043-.057), SRMR=.020.

Figure 1. Final (full mediation) model on the whole sample of participants (N=1886).

Table 2. Model fit indices for the multi-group SEM analysis across educational levels

Model	χ^2	df	χ^2_{diff}	df _{diff}	CFI	ΔCFI	TLI	SRMR	RMSEA (90% CI)
Model A	211.50*	58	-	-	.990	-	.984	.022	.053 (.045-.060)
Model B	218.18*	64	6.68	6	.990	.00	.985	.027	.050 (.043-.057)
Model C	321.18*	74	110.06*	16	.983	.007	.980	.052	.059 (.052-.066)
Model D	325.65*	76	-	-	.983	-	.980	.053	.058 (.052-.065)
Model E	333.73*	81	8.08	5	.983	.00	.981	.060	.057 (.051-.063)

Note. Model A=CFA configural invariance (baseline model); Model B=CFA metric invariance; Model C=CFA scalar invariance; Model D=SEM configural invariance; Model E=SEM structural invariance, *p<.001

CONCLUSIONS

- 1) It was confirmed that positive emotions and burnout fully mediate the relationship between perceived principal support and work engagement among teachers. Or in other words, principal support predicts work engagement only indirectly via positive emotions and burnout. Teachers, who perceive their school principal as more supportive, also experience more positive emotions in relation to their students and less burnout. Furthermore, teachers who experience more positive emotions and less burnout are more engaged in their job. Finally, results confirmed that emotions partially mediated the relationship between principal support and burnout.
- 2) Results showed sufficient robustness of hypothesized model across two samples of teachers. Structural paths between variables in model showed as equivalent across samples of class teachers and subject teachers.

Implications

Results of the present study emphasized the importance of affective processes, underlining both emotions and burnout, in the explanation of link between principal support and work commitment. Possible practical implications are directed to promoting work engagement of teachers by 1) increasing the principal support, and 2) increasing the awareness of the importance of positive emotions among teachers.

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