

Research paper

Positive teacher development model: Pathways to teachers job satisfaction and burnout

Ana Kozina ^{*} , Tina Pivec 

Educational Research Institute, Ljubljana, Slovenia



ARTICLE INFO

Keywords:

Teachers
Burnout
Job satisfaction
Internal assets
External assets
Relationships

ABSTRACT

Positive Teacher Development model understands the mechanisms of teachers' burnout and job satisfaction as a result of an interplay of multiple levels of individual ↔ context relationships, internal and external assets, being supported by teachers' relationships with students, colleagues, and school leaders. The model is grounded in the Socio-Ecological Model, Relational Developmental Systems Theory, and Self-Determination Theory. The fit of the model, a selection of direct and indirect paths, was tested on a sample of Slovene in-service teachers ($n = 1191$; 86.6% females; $M_{\text{age}} = 42.49$; $SD_{\text{age}} = 9.42$) with a measurement battery consisting of measures addressing internal assets (self-efficacy, intrinsic motivation, emotion regulation), external assets (work stressors, school values, system support), teachers' relationships (with students, colleagues and school leaders), job satisfaction, and burnout. The findings showcase the interconnectedness of internal and external assets with diverse direct paths leading from both internal assets and external assets to job satisfaction and burnout.

1. Introduction

In addressing the societal need for recruitment and retention of high-quality teachers, understanding the mechanisms of their positive development is crucial. The growing body of literature (i.e., Madigan & Kim, 2021; Skaalvik & Skaalvik, 2011) lists factors that contribute to teacher retention suggesting two of them, burnout and job satisfaction, being remarkably important (Madigan & Kim, 2021). Burnout, as a negative factor, is defined as a psychological syndrome emerging as a prolonged response to chronic job stressors (Maslach & Leiter, 2016). The teaching profession, characterised by high emotional demands, is often associated with significant stress (Jennings & Greenberg, 2009; McCarthy et al., 2016; Skaalvik & Skaalvik, 2020) making the teaching one of the professions that are more inclined to burnout (Garrick et al., 2014; Maslach et al., 2001). The latest TALIS study reports that on average 48.6 % of teachers indicated experiencing "a lot" or "quite a bit" of stress during their work, while only 10.2 % reported being entirely free from stress at work (OECD, 2025). In addition to jeopardizing job retention, stress and burnout have negative implications on various aspects of teachers' life as well as implications for their work in classrooms (i.e., mental health, student achievement; Klassen et al., 2010; Klusmann et al., 2016). Job satisfaction, as a positive factor, is defined as teachers' affective reactions to their work or teaching role (Skaalvik &

Skaalvik, 2010). It is associated with teachers' well-being, motivation, enthusiasm, and effective school functioning (Li & Wang, 2016; Shoshani & Eldor, 2016). Teacher's wellbeing is not only important for them but also affects their teaching styles (Aelterman et al., 2019; Katz & Moe, 2024) and overall supports positive student development (Aldrup et al., 2022).

Our study aimed to (a) thoroughly examine the pathways to positive teacher development by identifying internal and external assets leading to teachers' job satisfaction and burnout in addition to recognising the relational nature of teaching profession, (b) based on identified pathways develop and empirically test the Positive Teacher Development Model. In the following sections, components of the proposed model are presented first, followed by an introduction of the complete model.

Internal assets are psychological characteristics composed of motivational (e.g., intrinsic motivation), cognitive (e.g., self-efficacy), and emotional characteristics (e.g., emotion regulation) (Benson, 2007). As for motivational characteristics, teachers who are intrinsically motivated for their profession and driven by their core interest in teaching, report higher levels of job satisfaction and lower levels of burnout (Alexander et al., 2020; Saks et al., 2022; Slemple et al., 2020; Zhou et al., 2024). As for cognitive characteristics, one of the strongest predictors of teachers' job satisfaction and burnout as well as job retention is their self-efficacy (Bardach et al., 2022; Kim & Burić, 2020; Pikić Jugović

* Corresponding author. Educational Research Institute Gerbičeva 62, 1000, Ljubljana, Slovenia.

E-mail address: ana.kozina@pei.si (A. Kozina).

<https://doi.org/10.1016/j.tate.2026.105475>

Received 19 November 2025; Received in revised form 23 February 2026; Accepted 25 February 2026

Available online 28 February 2026

0742-051X/© 2026 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

et al., 2025; Shoji et al., 2016; Wang et al., 2015). The research evidence on the relationships between self-efficacy and burnout is supported by intervention studies, i.e., interventions focusing on promoting self-efficacy decreased burnout levels (Dicke et al., 2015), and longitudinal studies showing that self-efficacy preceding burnout and not vice versa (Schwarzer & Hallum, 2008). Self-efficacy has been identified both as a predictor and a moderator in the relationship between perceived stress and burnout (Dicke et al., 2014). As for emotional characteristics, teachers' social and emotional competencies are associated with numerous positive outcomes on teacher, student, and school levels (Kozina, 2025; Kozina et al., 2025). Research suggests that there is a negative relationship between teachers' social and emotional competencies and burnout (Kozina, 2024; Oliveira et al., 2021; Zhang et al., 2023). In addition, a meta-analysis by Oliveira et al. (2021) found that interventions aimed at developing teachers' social and emotional competencies reduced teacher burnout. Moreover, using more adaptive emotion regulation strategies lead to job satisfaction and job retention (Aldrup et al., 2020; Brackett et al., 2010; Chang, 2020).

External assets impact teachers' job satisfaction, burnout levels, and job retention on the contextual level. They can be organised into interconnected levels at the school level and at the broader systemic and societal levels (Bronfenbrenner, 1979). External assets are embedded within multiple contextual layers that interact with and shape one another. On the classroom level, work stressors such as discipline problems and low student motivation are associated with burnout, lower job satisfaction, and motivation to leave the teaching profession (Hakanen et al., 2006; Hascher & Waber, 2021; Johari et al., 2018; Sims, 2017; Skaalvik & Skaalvik, 2011). More specifically, not being able to control student behavior may cause a feeling of defeat and lack of authority, which may result in a stress response in teachers (Skaalvik & Skaalvik, 2011). Additionally, unmotivated students present a significant source of stress and a potential trigger for teacher burnout and attrition (Skaalvik & Skaalvik, 2016). On the school level, time pressure and value consonance predicted burnout (Aelterman et al., 2007; Hascher & Waber, 2021; Skaalvik & Skaalvik, 2017). Time pressure represents work assignments piling up, such as increasing demands for documentation and paperwork, more frequent meetings and communication with parents, the administration and scoring of achievement tests, frequent curriculum changes, and participation in a number of school development projects. These demands jeopardise teachers' rest and recovery period and can lead to burnout (Schaufeli & Bakker, 2004). Value consonance refers to the degree to which teachers feel that they share the norms and values at their school. For instance, agreement on which goals should be pursued, which content should be emphasized, and what educational means and methods should be used (Skaalvik & Skaalvik, 2011). Finally, the system level primarily regulates teachers' working conditions (e.g., working hours, flexibility, salary, work-life balance, career advancement), professional development (i.e., pre-service, in-service, education plans), and autonomy, as well as organizational-normative aspects (e.g., class size, the number of students with special needs and migrant students). It also includes norms, values, belief systems, and the ideology of society. In this regard, factors such as public trust in the education system, perception and value of the teaching profession in society, and attitude and value of knowledge and education in the society are considered particularly important. These factors may influence other external assets, as well as teachers' internal assets.

Finally, teaching profession is collaborative and relational in its core with the quality of teachers' relationships with students, colleagues, and school leaders shaping teachers' everyday life and wellbeing. These relationships impact teachers' internal assets, which are linked to burnout (Bardach et al., 2022), and external assets, which are associated with job satisfaction (Schleicher, 2018). Research has highlighted the diverse role of different types of relationships—with students, colleagues, school leaders—with selected outcomes. Relationships with students can be the main source of enjoyment, satisfaction, and professional motivation for

teachers (Hargreaves, 2000; Quan-McGimpsey et al., 2013; Spilt et al., 2011) or their main source of their work-related stress (Rieg et al., 2007). Nonetheless, relationships with students have been consistently associated with teachers' job satisfaction (Gil-Flores, 2017; Zakariya, 2020), together with school leaders' support (Chong et al., 2015). In contrast, research findings regarding relationships with colleagues are mixed: Weiqi (2007) found only a weak association with job satisfaction, while Hur et al. (2016) showed that collaboration with colleagues led to increased job satisfaction.

Based on the existing research evidence, we developed the Positive Teacher Development Model. In the model, we opposed to the deficit-oriented approach and adopted a strength-based perspective, which emphasizes strengths, resources, and opportunities in individuals and his or her contexts.

The Positive Teacher Development model (Fig. 1) postulates that internal and external assets, and their interplay, lead to teacher job satisfaction and to lower levels of burnout, while we argue that the relationship between assets levels and outcomes is supported by the teachers' relationships with students, colleagues, and school leaders. The model recognizes collaborative and relational nature of teaching by placing the quality of teachers' relationships with students, colleagues, and school leaders at its core. The model draws upon three theoretical frameworks: the Bio-Ecological Model (Bronfenbrenner & Morris, 2007), contributing a systemic perspective, Relational Developmental Systems Theory (Overton, 2015), contributing interactive understanding of development, and Self-Determination Theory (Ryan & Deci, 2000), adding an emphasis on relatedness and belonging. Using all three theoretical frameworks together allowed for a more comprehensive understanding of the phenomena. Firstly, the interactive aspect supported by the Bio-Ecological Model (Bronfenbrenner & Morris, 2007) is reflected in the model in the understanding that burnout and job satisfaction are results of a complex interplay between teachers' individual characteristics—referred to as internal assets (i.e., motivational, cognitive and emotional factors)—and contextual factors that are embedded in the contexts they belong to, referred to external assets (i.e., factors in the classroom, school, system, and social level). Specifically, it is represented by the paths leading from internal assets and external assets to the selected outcomes. Secondly, the systemic aspect of the model, supported by Relational Developmental Systems Theory (Overton, 2015), emphasizes that the mechanisms that lay behind selected teacher outcomes, burnout and job satisfaction, constitute a complex system of possible contributing factors which are affected by multiple levels and individual ↔ context relationships. More specifically, it is represented by the two-way interaction between internal and external assets. Thirdly, the relational aspect of the model, supported by Self-Determination Theory (Ryan & Deci, 2000), acknowledges relatedness as a basic human need and underscores the importance of teachers' relationships within the school community. Specifically, it is represented by adding relationships in-between assets and selected outcomes. While the research evidence for every part of the model is well established in the literature, the model as a whole has not yet been empirically tested.

Existing research indicates that teachers' internal assets, external assets, and the quality of teachers' relationships in schools are all associated with teachers' job satisfaction and burnout. However, studies that investigated pathways to job satisfaction and burnout were mainly focused on one aspect, either internal or external or relational, while comprehensive models that include the interplay among all mentioned layers are scarce. Moreover, models that incorporate both burnout and job satisfaction are rare as well. In the following section, we highlight studies with a broader focus. For instance, Sass et al. (2011) included external assets (students' engagement, student stressors) and relationships (social support from colleagues and school leaders), in their teachers' job satisfaction and job retention model. Their findings indicate that student engagement, student stressors, and school leaders' support contributed to job satisfaction and further on to intention to

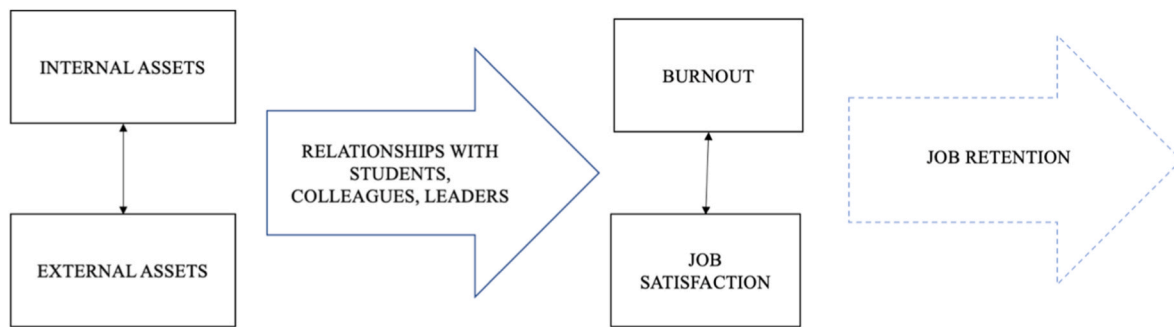


Fig. 1. Positive teacher development model.

quit. Among these factors, social support from school leaders and student stressors were the strongest predictors of job satisfaction while support from colleagues did not play a significant role. Skaalvik and Skaalvik (2011) focused on external assets as well, proposing that external assets, value consonance, time pressure and discipline problems, and relationships, with school leaders, colleagues and parents, led to burnout and school belongings and further on to job satisfaction and motivation to leave the profession. The results showed that time pressure and discipline problems led to burnout, while relationships and value consonance led to belongingness and further on to job satisfaction. Both burnout and job satisfaction were interrelated and led to motivation to leave the profession. Mérida-López et al. (2022) focused on internal assets, more specifically emotional intelligence, and relationships. Their findings demonstrated that higher emotional intelligence was associated with lower teachers' intention to quit via higher perceived support from school leaders. Ortan et al. (2021) tested and confirmed the predictive value of self-efficacy and relationships, together with work conditions for teachers' job satisfaction. Martin et al. (2012) showed a combination of internal and external assets, proposed job satisfaction and intention to quit to be a result of burnout and stressor associated with student behaviour that can be supported by instructional management and self-efficacy.

1.1. Current study

Existing research has primarily explored either individual or the contextual factors leading to teachers to quit their job, often neglecting the interaction between individual's and contextual characteristics. The current study moves beyond by building a comprehensive model that included predictors across interconnected levels. As such, the study offers both theoretical advancement and direct practical implications for teacher policy and professional development in Slovenia and beyond. More specifically, the study analyses the predictive power of selected internal and external assets in explaining teachers' positive outcome—job satisfaction—, and negative one—burnout. We hypothesize that both internal (i.e., self-efficacy, intrinsic motivation, and emotion regulation difficulties) and external assets (i.e., work stressors, value consonance, and system support) lead to lower levels of burnout and higher levels of job satisfaction. Further on, we hypothesize that there are significant indirect effects of teachers' relationships with students, colleagues, and school leaders on the relationship between internal assets, external assets and teachers' outcomes.

2. Method

2.1. Participants

The sample included Slovene in-service teachers ($n = 1191$; 86.6% females; $M_{age} = 42.49$; $SD = 9.42$) with 0 to 39 years of teaching experience ($M = 15.25$; $SD = 9.98$). In-service teachers were teaching either basic education ($n = 864$; 92.5% females; $M = 41.66$; $SD = 8.81$)

or upper-secondary education ($n = 306$; 69.9% females; $M = 44.84$; $SD = 10.34$).

2.2. Instruments

Emotion Regulation Difficulties. *Difficulties in Emotion Regulation Scale* (Bjureberg et al., 2016) is a 16-item measure assessing the dimensions of emotion regulation difficulties on a 5-point scale (1 - almost never; 5 - almost always). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .934.

Initial Motivation for Teaching. *Teacher motivation and perceptions* (OECD, 2018) consists of 7 items on 4-point scale measuring extrinsic and intrinsic motivation to pursue a teaching career. CFA confirmed an adequate fit of 2-factor structure. In the study, intrinsic motivation factor was used. Internal consistency for intrinsic motivation: .807.

Self-Efficacy. *Teacher self-efficacy* (Schwarzer & Hallum, 2008) measures teachers' self-perceived confidence in their ability to teach effectively in various challenging situations with 10 items on 4 points scale (1 - not true, 4 - true). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .839.

Work stressors. *Work stressors* (Skaalvik & Skaalvik, 2017) measures three dimensions of teachers' stressors: time pressure (3 items), discipline problems (3 items), and low motivated students (3 items) on a 6-point scale (1 - disagree, 6 - agree). CFA confirmed an adequate fit of 3-factor hierarchical structure. In the analyses hierarchical factor was used. Internal consistency: .866.

School Values. *Value consonance* was measured by a 3-item scale (Skaalvik & Skaalvik, 2011) on a 6-point scale (1 - completely disagree, 6 - completely agree). It measures teachers' perception that their personal educational values align with the school's prevailing norms. CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .902.

System Conditions. *System conditions* were measured with 11 items on a 4 point-scale (1 disagree, 4 - agree). They measured teachers' evaluation of the systemic conditions, i.e. satisfaction with pay check (2 items); policy impact, i.e. as involvement in policy decisions (2 items); profession reputation, i.e. the value of teachers' profession in wider society (4 items); competence support, i.e. the knowledge received in pre-service and in-service education (2 items). CFA confirmed an adequate fit of 4-factor hierarchical structure. In the study system conditions was used. Internal consistency for system condition: .775.

Relationships with students. *Student-teacher relationship scale* (Aldrup et al., 2018) assesses the quality of the teacher-student relationship as perceived by the teacher. It is a 6-item measure on a 5-point scale (1- not true, 5- true). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .851.

Relationships with colleagues. *Teacher collaboration* (OECD, 2017) is an 8-item measure on the frequency of collaboration between teachers assessed on a 6-point scale (1- never or almost never, 6 - every day or almost every day). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .819.

Relationships with school leaders. *Ethical leadership at work* (Kalshoven et al., 2011) The questionnaire measures teachers' perception of ethical leadership and the support provided by the principal or school leader to their staff using 7 items on a 5-point scale (1 – completely disagree, 5 completely agree). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .951.

Burnout. *Shirom-Melamed Burnout Questionnaire* (Melamed et al., 1992) is a 14-items self-report measure of three dimensions of burnout: physical fatigue, cognitive weariness, and emotional exhaustion on a 5-point scale (1 - almost never; 5 - almost always). CFA confirmed an adequate fit of 3-factor hierarchical structure. Internal consistency: .957.

Job Satisfaction. *Job Satisfaction Scale* (OECD, 2018) assesses two aspects of job satisfaction among teachers: satisfaction with the profession and satisfaction with the current work environment. The remaining two items assess whether teachers believe that society values the teaching profession and their satisfaction with their own work. It consists of 10 items on 6-point scale (1 not true, 6 true). CFA confirmed an adequate fit of 1-factor structure. Internal consistency: .843.

2.3. Procedure

The data is a part of a research project, named Positive Teacher Development Model - An interplay of the Individual (Motivational, Emotional, and Cognitive) and Contextual (School and System level) Assets during the School Year, which aimed to examine individual and contextual factors that may contribute to job satisfaction and teacher retention and may reduce burnout. For the data to reflect the population as closely as possible, all basic and upper-secondary schools in Slovenia were invited to participate. In the present study, 49 basic schools (out of 450 public basic schools in Slovenia) and 21 upper-secondary schools (out of 143 public upper-secondary schools in Slovenia) agreed to participate. Before the data collection procedure, questionnaires were translated into Slovene language using a committee approach (two independent expert translation and decision on the best translation by third independent expert) and the whole research project was approved by a Committee of Ethical Research in the Educational Research Institute (nr. 3-2024). After that, informed consents were obtained. Additionally, all participants were told what the survey is about, how the data will be collected, protected, and analysed and that they can withdraw their participation at any time. Participants received the link to the online questionnaire battery by the school coordinators. As the data collection is longitudinal, this study uses T1 data collection from the beginning of school year, that is September 2024. T2 and T3 followed at the middle and at the end of the school year, respectively.

2.4. Data analyses

The dataset was examined for missing values. The number of missing values was low, below 1.6 % on item level. Little's MCAR test revealed that the missing data were at random, $\chi^2(1016) = 744.775, p = 1.000$. We have conducted a series of CFAs for all measured constructs. When modifications were supported by the content of the items, correlations between items were added. We tested the theoretical model (Fig. 1) using SEM analyses (structural equation modeling) in Mplus 8.10 to explore relations between the variables. SEM is a statistical methodology that takes a confirmatory approach to the analysis (Byrne, 2001). The hypothesized model is statistically tested to determine the extent to which it is consistent with the data, which is referred to as the goodness of fit. If the goodness of fit is adequate, it supports the plausibility of the relations between the variables. In order to assess the model fit, we used well-established indices such as CFI, TLI, RMSEA, SRMR as well as the chi-square test statistics. For the CFI and TLI indices, values greater than .90 are typically considered acceptable and values greater than .95 indicate a good fit to the data (Byrne, 2001; Hu & Bentler, 1999). For well-specified models, an RMSEA of .06 or less reflects a good fit (Hu &

Bentler, 1999). As the data is nested (teachers teaching at the same schools), we have calculated ICC for the included variables (T1 data). As a number of variables exhibited ICC larger than .05 (work stressors (discipline problems): ICC = .103; system conditions: ICC = .327; relationships with colleagues: ICC = .102; relationships with school leaders: ICC = .157; job satisfaction: ICC = .112; other variables are below .05), we have corrected standard errors and chi-square tests using the sandwich estimator (type = complex).

3. Results

Firstly, means, standards deviations, and correlations were calculated (Table 1). Skewness and kurtosis were in the expected range (between -2 and 2) indicating a normal distribution.

Secondly, after analyzing CFAs of all measured constructs (Table 2), we tested the fit of Positive Teacher Development model using SEM analyses. We examined the direct paths from internal assets (i.e., self-efficacy, intrinsic motivation, emotion regulation difficulties) and external assets (i.e., work stressors, value consonance, system conditions) to two outcome variables—job satisfaction and burnout. In addition, the model tested the indirect effect of teachers' relationships with students, colleagues, and school leaders. The model (Fig. 2) fitted the data well ($\chi^2(4858) = 11284.160, p < 0.001, RMSEA = .033 (.033 - .034), CFI = .904, SRMR = .054$).

The model revealed several significant pathways from internal and external assets to the selected outcomes. Among internal assets, self-efficacy significantly predicted teachers' relationships with students and with colleagues but did not have a direct effect on job satisfaction or burnout. Difficulties in emotion regulation were positive predictor of burnout. Intrinsic motivation to pursue a teaching career significantly positively predicted relationships with students and colleagues as well as job satisfaction. Regarding external assets, school values were significant positive predictors of teachers' relationships with colleagues and school leaders, and job satisfaction. Work stressors significantly negatively predicted teachers' relationships with students and job satisfaction, while they were positive predictors of burnout. System conditions were positive predictors of teachers' relationships with colleagues and school leaders, and job satisfaction. Regarding relationships, teachers' relationships with students and school leaders significantly positively predicted job satisfaction while they were not related to burnout. Additionally, five indirect effects on job satisfaction emerged: from work stressors through relationships with students ($\beta = -.033, p = 0.086$), and from intrinsic motivation to pursue a teaching career through relationships with students ($\beta = .015, p = 0.095$), from system conditions through relationships with school leaders ($\beta = .031, p = 0.013$), and from school values through relationships with school leaders ($\beta = .043, p = 0.009$).

4. Discussion

The present study introduced the Positive Teacher Development model, conceptualized as an interplay between internal and external assets leading to positive outcomes (job satisfaction), and negative outcomes (burnout) through teacher relationships with students, colleagues and school leaders. Using data from a sample of Slovene in-service teachers, the results outlined several theoretically meaningful relations between these constructs, highlighting a complex interplay of internal, contextual, and relational factors that shape teachers' well-being and promote teacher retention.

Firstly, the model was based on theoretical foundations that highlighted the interplay between the individual and his or her context (i.e., relational-system theory, Overton, 2015) and the nested nature of these contexts (i.e., socio-ecological model, Bronfenbrenner, 1979). It was proposed in the model that teachers' cognitive (self-efficacy), emotional (emotion regulation difficulties), and motivational (intrinsic motivation to pursue a teaching career) characteristics are embedded within

Table 1
Correlations, means and standard deviations of study variables.

	SE	IM	ER	WS	SV	SYS	R-S	R-C	R-L	BR	JS
SE											
IM	.088**										
ER	-.292**	.043									
WS	-.226**	.030	.289**								
SV	.248**	.125**	-.122**	-.041							
SYS	.213**	.103**	-.140**	-.313**	.180**						
R-S	.492**	.126**	-.241**	-.219**	.183**	.179**					
R-C	.216**	.096**	-.029	.001	.191**	.068*	.282**				
R-L	.153**	.090**	-.071*	-.117**	.312**	.249**	.141**	.123**			
BR	-.271**	.072*	.441**	.547**	-.098**	-.306**	-.214**	-.029	-.134**		
JS	.290**	.066*	-.242**	-.417**	.290**	.489**	.272**	.113**	-.380**	-.468**	
M	3.11	2.87	1.97	3.87	4.71	2.08	3.32	3.00	3.38	2.39	4.29
SD	.38	.57	.64	.90	.80	.48	.46	1.02	.94	.86	.80

Notes: SE = self-efficacy; IM = intrinsic motivation to pursue a teaching career; ER = emotion regulation difficulties; WS = work stressors; SV = school values; SYS = system conditions; R-S = relationships with students; R-C = relationships with colleagues; R-L = relationships with school leaders; BR = burnout; JS = job satisfaction.

Table 2
Measurement model: Model Fit Indices for Latent Constructs.

Latent constructs	Loadings range	χ^2 (df)	CFI	RMSEA [90% CFI]	SRMR
SE	.513-.641	177.980 (32) ***	.945	.062 [.053, .071]	.040
IM	.725-.793	21.430 (12) ***	.997	.026 [.004, .043]	.014
ER	.362-.789	8148.300 (120) ***	.940	.064 [.059, .069]	.036
WS	.455-.923	144.702 (32) ***	.979	.055 [.046, .064]	.030
SV	.642-.918	69.458 (7) ***	.973	.087 [.069, .106]	.022
SYS	.473-.847	146.178(29) ***	.957	.059 [.049, .068]	.031
R-S	.593-.752	37.579(7) ***	.986	.061 [.043, .081]	.018
R-C	.316-.822	86.555(16) ***	.972	.061 [.049, .074]	.030
R-L	.807-.890	76.733(13) ***	.988	.064 [.051, .079]	.014
BR	.743-.941	400.645(71) ***	.973	.063 [.057, .069]	.039
JS	.336-.845	145.032(28) ***	.963	.060 [.050, .069]	.034

Note. *** $p \leq 0.001$. SE – self-efficacy, ER – emotion regulation difficulties, IM – intrinsic motivation to pursue a teaching career, SV – school values, WS – work stressors, SIS – system conditions, R-S – relationships with students, R-C – relationships with colleagues, R-L – relationships with school leaders, JS – job satisfaction, BR – burnout.

multiple layers, including their classrooms (time pressure, discipline problems, unmotivated students), school (school values), and broader society (system conditions). The vast majority of these variables are significantly associated which aligns with both systemic theories. The only non-significant relationship was between intrinsic motivation to pursue a teaching career and work stressors, suggesting that factors such as unmotivated students, discipline problems, and time pressure are not associated with intrinsic motivation to pursue a teaching career. It might be that the when they were deciding to become a teacher, they have not yet anticipated the variety of stressors associated with the profession.

Despite teachers' motivational styles showing stability over time (Praetorius et al., 2017), motivation is also contextually dependent (Stark et al., 2025), therefore, it might be more relevant for future studies to capture current motivation for teaching. On the other hand, the highest associations appeared between self-efficacy and both work stressors and school values, and between emotion regulation difficulties and work stressors. The findings suggest that in dealing with contextual stressors, teachers rely more on their cognitive and emotional resources than on motivational ones. It might be that cognitive and emotional processes are more effective when dealing with immediate stressors and the motivational processes are somehow in the background. We do have to stress out here that intrinsic motivation measured was the motivation to pursue a teaching profession and not intrinsic motivation in their daily work and additional studies incorporating a more comprehensive measurement of motivation is needed to further advance our understanding.

Secondly, the findings suggested that internal and external assets contributed differently to the quality of teachers' relationships and to their levels of job satisfaction and burnout. On an internal assets level, emotion regulation difficulties directly predicted burnout, while intrinsic motivation to pursue a teaching career was a significant positive predictor of job satisfaction. This indicates that teacher's initial motivation for becoming a teacher is associated with their job satisfaction, whereas their skills to regulate emotions are relevant for their prevention of burnout. The findings are aligned with metaanalytic research (Zhou et al., 2024) showing autonomous motivation as the strongest predictor of teacher' wellbeing as well as with research advocating for the use of social and emotional learning programmes for burnout prevention (Oliveira et al., 2021). Furthermore, teachers with higher levels of self-efficacy and those who report being intrinsically motivated when choosing their profession tend to form more positive relationships with both their students and colleagues. This implies that such teachers might be more attuned to their students' needs and at the same time they might create and maintain high quality of relationships with their colleagues. Contrary to previous research (e.g., Schwarzer & Hallum, 2008), which highlighted the importance of self-efficacy for burnout and job satisfaction, our model did not confirm a direct path between self-efficacy, burnout and job satisfaction. Given that Schwarzer and Hallum (2008) found that the relationship between self-efficacy and burnout is moderated by age, future research should explore age as a potential moderator. Further on, additional studies testing alternative models with different predictors are needed in case if suppression effect might influence the relationship between self-efficacy and burnout.

On the external assets level, all analysed external assets, on a classroom level (lower levels of work stressors), on a school level (greater school values consonance), and on system level (higher satisfaction with system conditions) predicted job satisfaction, whereas only predictor on

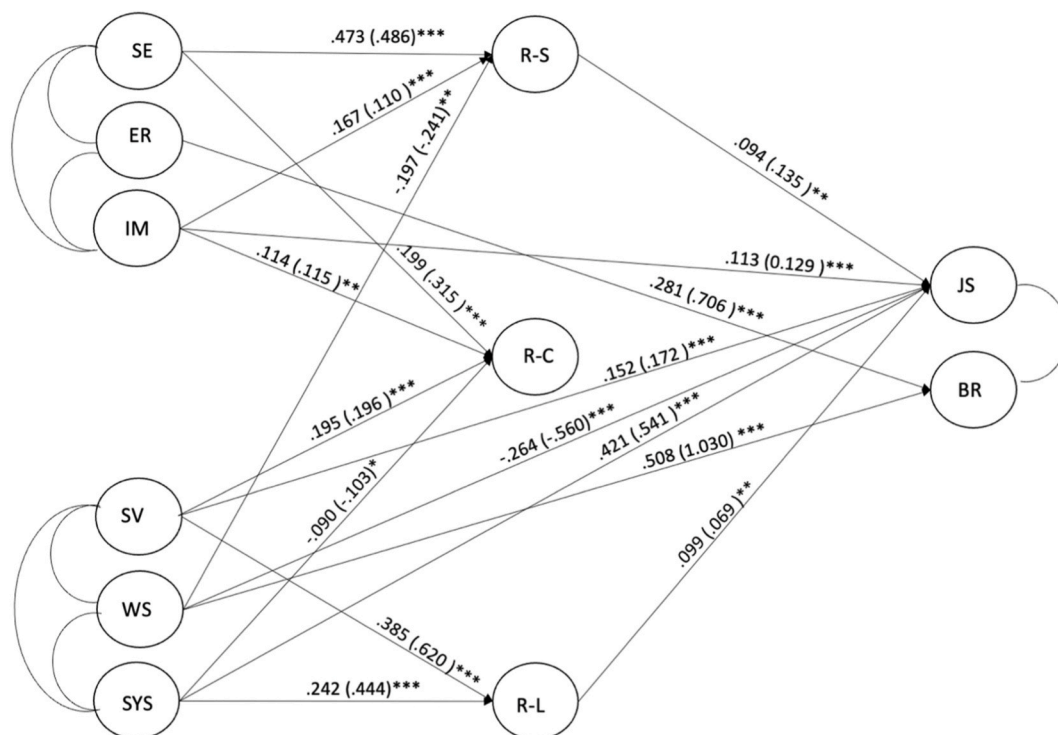


Fig. 2. Structural model: Internal assets, self-efficacy, intrinsic motivation, emotion regulation difficulties, and external assets, work stressors, value consonance, system conditions, leading to burnout and job satisfaction through relationships with students, colleagues, and school leaders. Notes. SE – self-efficacy, ER – emotion regulation difficulties, IM – intrinsic motivation to pursue a teaching career, SV – school values, WS – work stressors, SIS – system conditions, R-S – relationships with students, R-C – relationships with colleagues, R-L – relationships with school leaders, JS – job satisfaction, BR – burnout, *** < .001, ** < .05. Only significant paths are included. Unstandardised coefficients are in the brackets.

classroom level (higher levels of work stressors) predicting higher burnout. The importance of external assets of the teachers' outcomes align with the Skaalvik and Skaalvik studies (2011, 2017, 2020). External assets showed different patterns of associations with different types of relationships. For instance, work stressors negatively predicted relationships with students, while sharing school values and satisfaction with system conditions predicted more positive relationships with colleagues and school leaders. Moreover, work stressors were indirectly associated with job satisfaction via teachers' relationships with students. This finding confirms Spilt et al. (2011) hypothesis that the level of perceived work stress associated with students' behaviour and its impact on teachers' wellbeing is mediated by their perception of their relationships with students. However, it should be noted that, in the present study as well as in previous research, work stressors were measured at the classroom level and mainly reflected misbehaviour of students and teachers lack of capacities to deal with this misbehaviour in our study, which makes this path expected. Nevertheless, prior research (Evertson & Weinstein, 2006) highlighted that students' misbehaviour can be especially challenging for early-career teachers who may need more support in this area. Further on, the path between school values consonance and teacher' relationships with colleagues and school leaders are expected as well. School values reflect value consonance, that is, the degree to which teachers' personal values align with school values, which fulfils their need to belong. Value consonance is an emerging field that opens up the need to address the teachers' feeling of not sharing the values, not fitting in and its association with teachers' outcomes. Given the abundance of research on students' sense of belonging (Štremfel et al., 2024) and its impact on student outcomes, there is a clear need to address teachers' sense of belonging, particularly in light of teacher retention and turnover issues. Aligned with Skaalvik and Skaalvik (2011) research, having high sense of belongingness to school teachers are more likely to invest in creating high quality of relationships with their colleagues and school leaders. Further on, the

teachers' satisfaction with system conditions is reflected also in their positive relationships with colleagues and school leaders again reflecting the importance of feeling safe and supported in their work environment.

Thirdly, the findings suggest that the quality of teachers' relationships directly and indirectly contributes to their job satisfaction, more specifically positive relationships with students and school leaders. Positive relationships with school leaders and students directly predict teachers' higher job satisfaction. Perceiving low work stress, sharing school values and being satisfied with system conditions are on one hand directly predicting job satisfaction and also indirectly through positive relationship with school leaders and students. In contrast with previous research (Skaalvik & Skaalvik, 2011), relationships with colleagues did not predict job satisfaction directly nor indirectly. It might be that teachers' relationships with colleagues are less influential compared to teachers' relationships with students and school leaders. As Spilt et al. (2011) noted, students are the ones that teachers are in constant contact with as they spent most of their working hours in the classroom. Therefore, students might be more beneficial for teachers' well-being and for fulfilling teachers' need for relatedness compared to their relationships with colleagues, indicating that positive relationships between teachers and students matter for both students and teachers. Positive relationships with school leaders are also directly predicting job satisfaction, which might correspond to school leaders' role in monitoring, supervising, and evaluating teachers' work, which might further on impact job satisfaction. Thus, the indirect prediction of relationships for job satisfaction in our model is confirmed. In this regard, our study supports Ryan and Deci (2000) need to relate as one of the basic human needs. Interestingly, oppose to research (Skaalvik & Skaalvik, 2011) none of the relationships directly or indirectly predicted burnout. It might be that burnout, based on our findings at least, is aligned with relational system theory more a direct result of internal assets and external assets and not by their indirect effect through the relationships.

This will need to be addressed in more detail in future studies.

4.1. Practical implications

The study has several practical implications. On the level of internal assets, social and emotional learning interventions might be the key. More specifically, supporting teachers' emotional competencies can prevent burnout, while enhancing social competencies can foster high quality relationships with students and school leaders, ultimately promoting teachers' job satisfaction. In addition to social and emotional competencies, support for cognitive and motivational factors is needed as well. Motivational factors can be fostered through supervisions and reflections on the teacher role that encourage teachers to remember a personal value and meaning of teaching profession for them as well as to recall why they chose teaching in the first place. The support for cognitive factors involves building self-efficacy through skills development, especially skills associated with discipline problems (classroom management), motivating students (intrinsically motivated teachers are better able to support intrinsic motivation of students), and time management (focusing on prioritizing tasks, life-work balance).

External assets need to be supported on all levels. On classroom level the internal assets support as described above (e.g., managing work stressors can be supported fostering self-efficacy) is the first step. However, it is especially important that external assets support is implemented on school and system levels as well. On school level, school values need to be supported, firstly with recognising the importance of teachers' need to be accepted and valued in schools, and secondly by specific activities such as supporting team work, collaborative teaching and team building activities. On a system level, work stressors can decrease by lowering number of students in the classroom and lowering administrative burden for teachers. The wider systemic factors are often treated as beyond the actors', in our case teachers', control. In Slovenia, this definitely holds true, as the TALIS 2024 results (OECD, 2025) reveal that 7.4% of Slovenian teachers (21.7 % OECD average) report that teachers' profession is valued by society and only 5.3% of Slovenian teachers (16.1 % OECD average) believe teachers can influence educational policy. Systemic efforts are needed here, e.g., providing opportunities for teachers to take part in policy development, media campaigns to support teacher profession, providing autonomy and professional recognition on all levels of society. Last but not least, systemic efforts are needed to support the relationships on all levels, on the internal assets level before mentioned social and emotional learning is advised, and on the level of external assets, public and policy recognition on the importance of relationships is needed also by providing time and resources for supervisions and support with specific relationship target as well as relational support in pre-service and in-service teacher education.

4.2. Limitations, and future directions

The present study is limited by its inability to test hypotheses regarding reciprocal relationships or causality and true mediation. Specifically, due to the cross-sectional nature of the data, it is not possible to establish a temporal sequence, making causal inferences infeasible. To address this limitation, future studies should adopt a longitudinal design, which would allow for confirmation of the mediating effects and exploration of potential reciprocal relationships between self-efficacy and burnout, e.g., using cross-lagged panel models. Additionally, this study relied exclusively on self-report measures, which are susceptible to biases, including social desirability and response set biases; common method bias (Podsakoff et al., 2003). Future work should incorporate other-report data, e.g., students, school leaders' perspectives. However, we have to add that self-report offers anonymity that is much needed in the work context. Even though predominantly female, the sample is in fact a good representation of Slovene teachers, as these are predominantly female, we need to add

that the findings might not be representative for male teachers. The findings should be in future studies replicated in context where teacher profession is more gender balanced. In Slovenia, the teaching profession is heavily female-dominated, in early childhood (97% women), and in primary/lower secondary (88% women). The percentages are similar in EU, that is 85% for primary/lower secondary (Eurydice, 2013). Last but not least, the ambition of the Positive Teacher Development model is in addressing the complexity of the factors leading to teacher well-being. Moreover, the selection of the factors was based on the research evidence, however, additional constructs, e.g. resilience, mindsets, mindfulness, need to be added and the factors used in the model should be measured more comprehensively, e.g. motivation. Further on, it would be beneficial for future studies to address moderation of different contextual variables, e.g. teachers in urban vs non-urban schools (Wang et al., 2024). This study is the first empirical test of the model with plans for future studies to incorporate longitudinal design, qualitative data, as well as testing possible intervening variables such as career stages or the educational level teachers are teaching at.

5. Conclusions

Our study addressed contemporary structural problems of the teaching profession in Slovenia by providing an evidence-based views based on positive development perspective on the possible contributors to teachers' burnout and job satisfaction. This approach's added value is, in addition to its positive perspective, its recognition of the interconnectedness of various systems within the educational context and acknowledgement of the importance of teachers' perceptions and experiences of support on different levels connected to their positive development. Additionally, the study investigated the role of different types of relationships for the teachers' job satisfaction and burnout. Our findings partially support theoretical model Positive Teacher Development Model by showing the interactive nature and contextual embeddedness of internal and external assets and their contribution to both measured outcomes, job satisfaction and burnout. In comparison with internal assets, external assets showed stronger and more direct associations with job satisfaction and burnout. As for the indirect role of relationships, the theoretical model shows good fit for job satisfaction, while model modifications regarding burnout are needed in future studies. More specifically, unlike with job satisfaction, the paths from internal assets to burnout did not go through relationships. Furthermore, relationships with colleagues did not play a prominent role. However, we have to acknowledge that the measures used reflected collaboration more than support from colleagues. In the future studies, we suggest expanding the measurement of relationships to more fully address all types of relationships.

CRedit authorship contribution statement

Ana Kozina: Writing – original draft, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Tina Pivec:** Writing – review & editing, Project administration, Methodology, Data curation, Conceptualization.

Ethical statement

The author(s) declare that they have no competing or potential conflicts of interest. The research design and data collection followed the ethical guidelines of the Slovenian Psychological Association. The research was approved by the Committee of Ethical Research in the Educational Research Institute with approval number (nr. 3-2024). All participants gave informed consent.

Declaration of competing interest

The author(s) declare that they have no competing or potential conflicts of interest.

Acknowledgements

This work was supported by the Slovenian Research and Innovation Agency (J5-50156, P5-0106).

Data availability

Data will be made available on request.

References

- Aelterman, A., Engels, N., Van Petegem, K., & Pierre Verhaeghe, J. (2007). The well-being of teachers in Flanders: The importance of a supportive school culture. *Educational Studies*, 33(3), 285–297. <https://doi.org/10.1080/03055690701423085>
- Aelterman, N., Vansteenkiste, M., Haerens, L., Soenens, B., Fontaine, J. R., & Reeve, J. (2019). Toward an integrative and fine-grained insight in motivating and demotivating teaching styles: The merits of a circumplex approach. *Journal of Educational Psychology*, 111(3), 497–521. <https://doi.org/10.1037/edu0000293>
- Aldrup, K., Carstensen, B., & Klusmann, U. (2022). Is empathy the key to effective teaching? A systematic review of its Association with teacher-student interactions and student outcomes. *Educational Psychology Review*, 34, 1177–1216. <https://doi.org/10.1007/s10648-021-09649-y>
- Aldrup, K., Carstensen, B., Köller, M. M., & Klusmann, U. (2020). Measuring teachers' social-emotional competence: Development and validation of a situational judgment test. *Frontiers in Psychology*, 11, 892. <https://doi.org/10.3389/fpsyg.2020.00892>
- Aldrup, K., Klusmann, U., Lüdtke, O., Göllner, R., & Trautwein, U. (2018). Student misbehavior and teacher well-being: Testing the mediating role of the teacher-student relationship. *Learning and Instruction*, 58, 126–136. <https://doi.org/10.1016/j.learninstruc.2018.05.006>
- Alexander, C., Wyatt-Smith, C., & Du Plessis, A. (2020). The role of motivations and perceptions on the retention of in-service teachers. *Teaching and Teacher Education*, 96, Article 103186. <https://doi.org/10.1016/j.tate.2020.103186>
- Bardach, L., Klassen, R. M., & Perry, N. E. (2022). Teachers' psychological characteristics: Do they matter for teacher effectiveness, teachers' well-being, retention, and interpersonal relations? An integrative review. *Educational Psychology Review*, 34(1), 259–300. <https://doi.org/10.1007/s10648-021-09614-9>
- Benson, P. L. (2007). Developmental assets: An overview of theory, research, and practice. In R. K. Silbereisen, & R. M. Lerner (Eds.), *Approaches to positive youth development* (33–59). Sage.
- Bjoreberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L. G., Bjärehed, J., DiLillo, D., Messman-Moore, T., Hellner Gumpert, C., & Gratz, K. L. (2016). Development and validation of a brief version of the difficulties in emotion regulation scale: The DERS-16. *Journal of Psychopathology and Behavioral Assessment*, 38, 284–296. <https://doi.org/10.1007/s10862-015-9514-x>
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the Schools*, 47(4), 406–417. <https://doi.org/10.1002/pits.20478>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by Nature and Design*. Harvard University Press.
- Bronfenbrenner, U., & Morris, P. A. (2007). The bioecological model of human development. In W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). John Wiley & Sons.
- Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, 1(1), 55–86. https://doi.org/10.1207/S15327574IJT0101_4
- Chang, M.-L. (2020). Emotion display rules, emotion regulation, and teacher burnout. *Frontiers in Education*, 5, 90. <https://doi.org/10.3389/educ.2020.00090>
- Chong, M. Y., Mansur, K., & Ho, Y. J. (2015). The influence of perception of school principal's leadership on teachers' job satisfaction in the interior of Sabah, Malaysia: A case study in Beaufort. *Korean Sociological Science*, 42, 1–12. <https://doi.org/10.1007/s40483-014-0020-7>
- Dicke, T., Elling, J., Schmeck, A., & Leutner, D. (2015). Reducing reality shock: The effects of classroom management skills training on beginning teachers. *Teachers and Teaching Education*, 48, 1–12. <https://doi.org/10.1016/j.tate.2015.01.013>
- Dicke, T., Parker, P. D., Marsh, H. W., Kunter, M., Schmeck, A., & Leutner, D. (2014). Self-efficacy in classroom management, classroom disturbances, and emotional exhaustion: A moderated mediation analysis of teacher candidates. *Journal of Educational Psychology*, 106(2), 569–583. <https://doi.org/10.1037/a0035504>
- Eurydice. (2013). *Key data on teachers and school leaders in Europe: 2013 edition*. Publications Office of the European Union.
- Evertson, C. M., & Weinstein, C. S. (2006). Classroom management as a field of inquiry. In C. M. Evertson, & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 1–14). Routledge.
- Garrick, A., Winwood, P. C., Mak, A. S., Cathcart, S., Bakker, A. B., & Lushington, K. (2014). Prevalence and organisational factors of psychological injury among Australian school teachers. *The Australasian Journal of Organisational Psychology*, 7, Article e5. <https://doi.org/10.1017/orp.2014.5>
- Gil-Flores, J. (2017). The role of personal characteristics and school characteristics in explaining teacher job satisfaction. *Revista de Psicodidáctica*, 22(1), 16–22. <https://doi.org/10.1387/RevPsicodidact.15501>
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43, 495e513. <https://doi.org/10.1016/j.jsp.2005.11.001>
- Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16(8), 811–826. [https://doi.org/10.1016/S0742-051X\(00\)00028-7](https://doi.org/10.1016/S0742-051X(00)00028-7)
- Hascher, T., & Waber, J. (2021). Teacher well-being: A systematic review of the research literature from the year 2000–2019. *Educational Research Review*, 34, Article 100411. <https://doi.org/10.1016/j.edurev.2021.100411>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Hur, E., Jeon, L., & Buettner, C. K. (2016). Preschool teachers' child-centered beliefs: Direct and indirect associations with work climate and job-related wellbeing. *Child and Youth Care Forum*, 45, 451–465. <https://doi.org/10.1007/s10566-015-9338-6>
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>
- Johari, J., Tan, F. Y., & Zulkarnain, Z. I. T. (2018). Autonomy, workload, work-life balance and job performance among teachers. *International Journal of Educational Management*, 32(1), 107–120. <https://doi.org/10.1108/IJEM-10-2016-0226>
- Kalshoven, K., Den Hartog, D. N., & De Hoogh, A. H. B. (2011). Ethical leadership at work questionnaire (ELW): Development and validation of a multidimensional measure. *The Leadership Quarterly*, 22(1), 51–69. <https://doi.org/10.1016/j.leaqua.2010.12.007>
- Katz, I., & Moe, A. (2024). Exploring teachers' psychological needs, motivating styles, emotion regulation and self-compassion: A comparative study before and during the COVID-19 lockdown. *Teaching and Teacher Education*, 148, Article 104706. <https://doi.org/10.1016/j.tate.2024.104706>
- Kim, L. E., & Burić, I. (2020). Teacher self-efficacy and burnout: Determining the directions of prediction through an autoregressive cross-lagged panel model. *Journal of Educational Psychology*, 112, 1661–1676. <https://doi.org/10.1037/edu0000424>
- Klassen, R. M., Usher, E. L., & Bong, M. (2010). Teachers' collective efficacy, job satisfaction, and job stress across-cultural context. *The Journal of Experimental Education*, 78(4), 464–486. <https://doi.org/10.1080/00220970903292975>
- Klusmann, U., Richter, D., & Lüdtke, O. (2016). Teachers' emotional exhaustion is negatively related to students' achievement: Evidence from a large-scale assessment study. *Journal of Educational Psychology*, 108, 1193e1203. <https://doi.org/10.1037/edu0000125>
- Kozina, A. (2024). The effects of the Hand in Hand: Empowering Teachers (HAND: ET) programme on teacher burnout in Slovenia. Do experience and baseline emotional competencies matter? *Current Psychology*, 43, 35185–35194. <https://doi.org/10.1007/s12144-024-06983-6>
- Kozina, A. (2025). Mindfulness and teachers' diversity awareness: Indirect effect of mindful teaching in a sample of in-service teachers. *Social Psychology of Education*, 28, 164. <https://doi.org/10.1007/s12188-025-10111-y>
- Kozina, A., Rožman, M., & Veldin, M. (2025). Teachers' mindfulness following a social, emotional and intercultural learning intervention as a support mechanism for dealing with emotional problems. *Teacher Development*, 29(5), 1088–1103. <https://doi.org/10.1080/13664530.2025.2460596>
- Li, M., & Wang, Z. (2016). Emotional labour strategies as mediators of the relationship between public service motivation and job satisfaction in Chinese teachers. *International Journal of Psychology*, 51(3), 177–184. <https://doi.org/10.1002/ijop.12114>
- Madigan, D. J., & Kim, L. E. (2021). Towards an understanding of teacher attrition: A meta-analysis of burnout, job satisfaction, and teachers' intentions to quit. *Teaching and Teacher Education*, 105, Article 103425. <https://doi.org/10.1016/j.tate.2021.103425>
- Martin, N. K., Sass, D. A., & Schmitt, T. A. (2012). Teacher efficacy in student engagement, instructional management, student stressors, and burnout: A theoretical model using in-class variables to predict teachers' intent-to-leave. *Teaching and Teacher Education*, 28(4), 546–559. <https://doi.org/10.1016/j.tate.2011.12.003>
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 152, Article 103e111. <https://doi.org/10.1002/wps.20311>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(2001), 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- McCarthy, C. J., Lambert, R. G., Lineback, S., Fitchett, P., & Baddouh, P. G. (2016). Assessing teacher appraisals and stress in the classroom: Review of the classroom appraisal of resources and demands. *Educational Psychology Review*, 28, 577–603. <https://doi.org/10.1007/s10648-015-9322-6>
- Melamed, S., Kushnir, T., & Shirom, A. (1992). Burnout and risk factors for cardiovascular diseases. *Behavioral Medicine*, 18(2), 53–60. <https://doi.org/10.1080/08964289.1992.9935172>
- Mérida-López, S., Quintana-Orts, C., Hints, T., & Extremera, N. (2022). Emotional intelligence and social support of teachers: Exploring how personal and social

- resources are associated with job satisfaction and intentions to quit job. *Revista de Psicodidáctica*, 27(2), 168–175. <https://doi.org/10.1016/j.psicoe.2022.02.001>
- OECD. (2017). PISA 2015 Background questionnaires. In *PISA 2015 assessment and analytical framework: Science, reading, mathematics, financial literacy and collaborative problem solving*. OECD Publishing. <https://doi.org/10.1787/9789264281820-9-en>.
- OECD. (2018). *Teaching and Learning International Survey (TALIS): Teacher questionnaire*. <https://www.pei.si/wp-content/uploads/2019/06/TALIS18-Uciteljji-SS.pdf>.
- OECD. (2025). *TALIS 2024 results*. OECD Publishing.
- Oliveira, S., Roberto, M. S., Veiga-Sim, A. M., & Marques-Pinto, A. (2021). A meta-analysis of the impact of social and emotional learning interventions on teachers' burnout symptoms. *Educational Psychology Review*, 33, 1779–1808. <https://doi.org/10.1007/s10648-021-09612-x>
- Ortan, F., Simut, C., & Simut, R. (2021). Self-Efficacy, job satisfaction and teacher well-being in the K-12 educational System. *International Journal of Environmental Research and Public Health*, 18(23), Article 12763. <https://doi.org/10.3390/ijerph182312763>
- Overton, W. F. (2015). Processes, relations, and relational–developmental–systems. In W. F. Overton, P. C. M. Molenaar, & R. M. Lerner (Eds.), *Handbook of child psychology and developmental science: Theory and method* (pp. 9–62). John Wiley & Sons, Inc.
- Pikić Jugović, I., Marušić, I., & Matić Bojić, J. (2025). Early career teachers' social and emotional competencies, self-efficacy and burnout: A mediation model. *BMC Psychology*, 13, 9. <https://doi.org/10.1186/s40359-024-02323-2>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Praetorius, A. K., Laueremann, F., Klassen, R. M., Dickhäuser, O., Janke, S., & Dresel, M. (2017). Longitudinal relations between teaching-related motivations and student-reported teaching quality. *Teaching and Teacher Education*, 65, 241–254. <https://doi.org/10.1016/j.tate.2017.03.023>
- Quan-McGimpsey, S., Kuczynski, L., & Brophy, K. (2013). Tensions Between the Personal and the Professional in Close Teacher-Child Relationships. *Journal of Research in Childhood Education*, 27(1), 111–126. <https://doi.org/10.1080/02568543.2012.738287>.
- Rieg, S. A., Paquette, K. R., & Chen, Y. (2007). Coping with stress: An investigation of novice teachers' stressors in the elementary classroom. *Education*, 128(2).
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Saks, K., Hunt, P., Leijen, A., & Lepp, L. (2022). To stay or not to stay: An empirical model for predicting teacher persistence. *British Journal of Educational Studies*, 70(6), 693–717. <https://doi.org/10.1080/00071005.2021.2004995>
- Sass, D. A., Seal, A. K., & Martin, N. K. (2011). Predicting teacher retention using stress and support variables. *Journal of Educational Administration*, 49(2), 200–215. <https://doi.org/10.1108/095782311111116734>
- Schaufeli, W. B., & Bakker, A. D. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25, Article 293e315. <https://doi.org/10.1002/job.248>
- Schleicher, A. (2018). *Valuing our Teachers and raising their status: How communities can help (international summit on the teaching profession)*. OECD Publishing.
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout. *Applied Psychology: International Review*, 57, 152–171. <https://doi.org/10.1111/j.1464-0597.2008.00359.x>
- Shoji, K., Cieslak, R., Smoktunowicz, E., Rogala, A., Benight, C. C., & Luszczynska, A. (2016). Associations between job burnout and self-efficacy: A meta-analysis. *Anxiety, Stress & Coping*, 29, 367–386. <https://doi.org/10.1080/10615806.2015.1058369>
- Shoshani, A., & Eldor, L. (2016). The informal learning of teachers: Learning climate, job satisfaction and teachers' and students' motivation and well-being. *International Journal of Educational Research*, 79, 52–63. <https://doi.org/10.1016/j.ijer.2016.06.007>
- Sims, S. (2017). *Talis 2013: Working conditions, teacher job satisfaction and retention. Statistical working paper*. UK Department for Education.
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and Teacher Education*, 26(4), 1059–1069. <https://doi.org/10.1016/j.tate.2009.11.001>
- Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relations with school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education*, 27(6), 1029–1038. <https://doi.org/10.1016/j.tate.2011.04.001>
- Skaalvik, E. M., & Skaalvik, S. (2016). Teacher stress and teacher self-efficacy as predictors of engagement, emotional exhaustion, and motivation to leave the teaching profession. *Creative Education*, 7, 1785–1799. <https://doi.org/10.4236/ce.2016.713182>
- Skaalvik, E. M., & Skaalvik, S. (2017). Dimensions of teacher burnout: Relations with potential stressors at school. *Social Psychology of Education*, 20, 775–790. <https://doi.org/10.1007/s11218-017-9391-0>
- Skaalvik, E. M., & Skaalvik, S. (2020). Teacher burnout: Relations between dimensions of burnout, perceived school context, job satisfaction and motivation for teaching. A longitudinal study. *Teachers and Teaching*, 26(7–8), 602–616. <https://doi.org/10.1080/13540602.2021.1913404>
- Slemp, G. R., Field, J. G., & Cho, A. S. (2020). A meta-analysis of autonomous and controlled forms of teacher motivation. *Journal of Vocational Behavior*, 121, Article 103459. <https://doi.org/10.1016/j.jvb.2020.103459>
- Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher-student relationships. *Educational Psychology Review*, 23, 457–477. <https://doi.org/10.1007/s10648-011-9170-y>
- Stark, K., Camburn, E., & Kaler, L. (2025). Variation in teachers' daily situational motivation across professional activities. *British Journal of Educational Psychology*, 220–238. <https://doi.org/10.1111/bjep.12769>
- Štremfel, U., Šterman Ivancić, K., & Peras, I. (2024). Addressing the sense of school belonging among all students? A systematic literature review. *European Journal of Investigation in Health Psychology and Education*, 14(11), 2901–2917. <https://doi.org/10.3390/ejihpe14110190>
- Wang, H., Hall, N. C., & Rahimi, S. (2015). Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting intentions. *Teaching and Teacher Education*, 47, 120–130. <https://doi.org/10.1016/j.tate.2014.12.005>
- Wang, J., Xing, Q., & Moè, A. (2024). Teacher emotion regulation in Chinese rural and urban schools: Impact on burnout and teaching styles. *The Asia-Pacific Education Researcher*, 1–14. <https://doi.org/10.1007/s40299-024-00963-x>
- Weiqi, C. (2007). The structure of secondary school teacher job satisfaction and its relationship with attrition and work enthusiasm. *Chinese Education and Society*, 40(5), 17–31. <https://doi.org/10.2753/CED1061-1932400503>
- Zakariya, Y. F. (2020). Effects of school climate and teacher self-efficacy on job satisfaction of mostly STEM teachers: A structural multigroup invariance approach. *International Journal of STEM Education*, 7(1), 10. <https://doi.org/10.1186/s40594-02000209-4>
- Zhang, W., He, E., Mao, Y., Pang, S., & Tian, J. (2023). How teacher social-emotional competence affects job burnout: The chain mediation role of teacher-student relationship and well-being. *Sustainability*, 15, 2061. <https://doi.org/10.3390/su15032061>
- Zhou, S., Slemp, G. R., & Vella-Brodick, D. A. (2024). Factors associated with teacher wellbeing: A meta-analysis. *Educational Psychology Review*, 36, 63. <https://doi.org/10.1007/s10648-024-09886-x>