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# THRIVING OR SURVIVING? WORK ENGAGEMENT AND BURNOUT PROFILES AMONG EARLY-CAREER TEACHERS

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The aim of this study was to identify early-career teachers' profiles based on their occupational well-being, i.e. work engagement and burnout, and to examine differences in job satisfaction and planned persistence in the teaching profession across these profiles. A total of 599 subject teachers with up to 5 years of teaching experience completed an online questionnaire assessing their occupational well-being and related outcomes. Latent profile analysis identified three distinct profiles: highly engaged (50.3%), moderately engaged (43.7%), and at risk (6.0%). Whereas highly and moderately engaged profiles reflected high to moderate levels of work engagement and low levels of burnout, the at risk profile reflected around-average levels of both work engagement and burnout. Teachers in the highly engaged profile reported the highest job satisfaction and strongest intention to remain in the profession, followed by those in the moderately engaged profile, whereas at risk teachers had the lowest levels of satisfaction and planned persistence. These findings support previous research, emphasising the critical role of occupational well-being in fostering teacher retention and job satisfaction.

Keywords: teachers' occupational well-being, work engagement, burnout, early-career teachers, person-centred approach

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## INTRODUCTION

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In recent years, teacher well-being has gained prominence in educational research, reflecting increasing interest in its underlying antecedents and associated outcomes. This growing interest is driven by multiple reasons. Namely, teacher shortage has become a serious concern in many countries worldwide (Admiraal & Kittelsen Røberg, 2023; la Velle, 2019), partly due to an ageing teacher population and the decline in the attractiveness of the teaching profession. Croatia is no exception to this trend, with a particularly noticeable shortage of subject teachers, especially in the STEM area (Domović & Drvodelić, 2025).

Furthermore, teacher attrition is another significant global challenge (Dreer, 2023; Skaalvik & Sklaalvik, 2017). The literature implies that an increasing number of teachers are considering other career options, and the consequences of teacher turnover reflect on instructional quality, students' engagement and learning, and overall school dynamics (Räsänen et al., 2020). Therefore, attracting high-quality candidates to the teaching profession on one hand, and ensuring working conditions that would motivate them to remain in the profession are two interconnected concerns with considerable and far-reaching implications.

Previous studies suggest that, among factors related to teacher attrition, various aspects of teachers' well-being often stand out as crucial for considering career change, including teacher burnout, occupational stress and job satisfaction (Skaalvik & Skaalvik, 2017). Within the context of teacher attrition, early-career teachers are of particular interest and concern (Schuck et al., 2018). Namely, the gap between the theory and practice during initial stages of a teaching career is often linked to higher attrition rates, as new teachers struggle to balance the reality of everyday school life (Admiraal et al., 2023). Consequently, workload, as one of the most significant factors affecting teachers' well-being (Ostermeier et al., 2023), can be even more overwhelming among early-career teachers. Enhancing well-being of early-career teachers may therefore be essential for their motivation to remain in the profession. Accordingly, the focus of this study is on examining the patterns of well-being among early-career subject teachers and how these patterns relate to job satisfaction and career intentions. Additionally, this study is placed within the context of single-structure elementary school level, which presents specific challenges related to students' educational transition from having (mostly) one classroom teacher to interacting with many different subject teachers (Herman et al., 2020; Marušić et al., 2020).

## **Work engagement and burnout as indicators of teachers' well-being and job satisfaction**

The conceptualisation and theoretical approaches to teachers' well-being vary in the literature, reflecting the multidimensionality of this construct (Castro Silva et al., 2026; Dreer, 2023; Hascher & Waber, 2021). A common theoretical framework used in studies of teachers' occupational well-being is the Job Demands-Resources (JD-R) model (Bakker et al., 2023). This model highlights that well-being is, on one hand, closely linked to various personal and contextual resources that contribute to positive outcomes, and, on the other, it is closely intertwined with different aspects of the work environment known as job demands. Job demands include aspects that can be stressful and require investing a significant amount of effort. Literature clearly indicates that the teaching profession is a demanding profession in several ways (emotionally, intellectually, and physically), and that teacher-burnout has become a significant concern (e.g. Castro Silva et al., 2026; Salmela-Aro et al., 2019). The JD-R model encompasses both positive and negative indicators of well-being, whereby work engagement, as a positive, and burnout as a negative indicator of well-being are predominantly explored (Bakker et al., 2023). These two indicators can be considered distinct and opposed constructs that are negatively related (Schaufeli & Bakker, 2010). However, recent studies using a person-centred approach have shown that burnout and engagement can coexist within the same individual (Salmela-Aro et al., 2019; Holstrom et al., 2023; Van der Vaart & de Beer, 2021). In studies among Finnish teachers, in addition to distinct engaged and burned-out profiles, a mixed profile characterised by both high engagement and high burnout has been identified across two different samples (Salmela-Aro et al., 2019; Holstrom et al., 2023). These three profiles were also identified in a study of South African adults; additionally, the study revealed profiles reflecting average engagement and burnout, as well as a profile with slightly above average burnout and below average engagement (Van der Vaart & de Beer, 2021).

From the perspective of the JD-R model, teacher well-being can be viewed as a job resource associated with numerous positive outcomes, such as higher work satisfaction and motivation to remain in the teaching profession (Skaalvik & Skaalvik, 2018).

Work engagement has been extensively studied across various organisational contexts, and has recently gained prominence in research on teachers. The unique characteristics of the educational context require a conceptualisation of work engagement specific to the teaching profession. Klassen et al. (2013) propose three dimensions of teachers' work engagement:

cognitive, emotional and social, whereby the social dimension encompasses relationships with students and colleagues, highlighting the essential interpersonal nature of teaching, i.e., investing energy in establishing and maintaining these relationships. Research on teacher work engagement has linked this construct with various outcomes for both teachers and students, demonstrating its multiple importance. Highly engaged teachers tend to show higher commitment and involvement (Kern et al., 2014; Timms & Brough, 2013), job satisfaction and persistence in the profession (Skaalvik & Skaalvik, 2018). They are also less likely to experience exhaustion (Hakanen et al., 2006) and are more student-centred (Turner et al., 2021). In addition to these teacher-related outcomes, teachers' work engagement reflects on student outcomes as well. For example, previous studies revealed that work engagement is positively correlated with student motivation (Leal-Soto et al., 2018), prosocial skills (Herman et al., 2020), and achievement (Wang et al., 2022).

Burnout, on the other hand, is a negative indicator of teachers' occupational well-being, and it is "commonly used to describe a state of mental weariness" (Schaufeli & Bakker, 2004, p. 294). The conceptualisation and assessment of burnout can vary depending on the theoretical perspective and the instruments that either assess several dimensions or only one (exhaustion). Schaufeli and Bakker (2020) proposed a renewed conceptualisation and assessment of burnout that includes four dimensions: exhaustion, cognitive impairment, emotional impairment, and mental distance, whereby the first three dimensions represent the inability to invest energy, and the latter the unwillingness to invest energy. The consequences of burnout on teachers are diverse and are often related to prolonged overload and stress (Moyano et al., 2022). Literature indicates that the burnout symptoms seem to increase among teachers (Salmela-Aro et al., 2019; Skaalvik & Skaalvik, 2016), and, in some cases, these symptoms can coexist with a high level of work engagement (Holmström et al., 2023). Teachers who experience emotional exhaustion and stress are more likely to feel dissatisfied with their career choice and may be more inclined to leave the profession (Skaalvik & Skaalvik, 2016). Furthermore, teacher burnout is linked to poorer physical and mental health (Hakanen et al., 2006) and lower self-efficacy (Kim & Burić, 2020). In addition, the effects of teachers' emotional exhaustion also extend to student outcomes. Arens and Morin's study (2016) found negative associations between teachers' exhaustion and students' school grades, satisfaction with teacher support and satisfaction with school. Similarly, Granziera et al. (2023) obtained a negative association between teacher emotional exhaustion and student achievement at a school-average level.

Previous findings suggest that a comprehensive understanding of teacher burnout is crucial due to its significant consequences on multiple levels – individual, educational, societal and economic. Addressing this issue in early career stages can mitigate the risk of potential negative outcomes, including teacher attrition at the very beginning of their professional course.

Increased interest in teacher well-being has recently led to numerous studies exploring various constructs as its precursors and outcomes, including the intention to remain in the profession and job satisfaction (Holmström et al., 2023; Dreer, 2021; Wang et al., 2024). While intentions to leave the profession are consistently viewed as an outcome of well-being, the role of job satisfaction remains changeable. Namely, in the literature, job satisfaction is comprehended both as a potential antecedent and an outcome of occupational well-being; however, previous analyses have indicated that the causal effects from well-being to job satisfaction are stronger than *vice versa* (Bowling et al., 2010). These empirical findings support the JD-R theory (Bakker et al., 2023), which posits that burnout and work engagement, as key aspects of occupational well-being, shape important job outcomes, such as job satisfaction and career intentions. Recent literature articulates the need for further studies to shed more light on this association within the teaching context, acknowledging that teachers' well-being is a multidimensional construct that affects job satisfaction (Dreer, 2021). This perspective comprehends teacher well-being as an individual resource that contributes to their job satisfaction and intention to stay in the profession.

Studies so far have demonstrated the association of teacher well-being and job satisfaction; however, with varying conceptualisations and theoretical approaches to teachers' well-being (Dreer, 2023). Although dimensions of job satisfaction may also vary, this construct generally refers to a sense of fulfilment and gratification through teaching, and one commonly used measure of job satisfaction derives from the OECD Teaching and Learning International Survey – TALIS 2018 (OECD, 2019). This survey includes two key aspects of teacher job satisfaction: satisfaction with the profession, which refers to satisfaction with career choice; and satisfaction with the work environment, which pertains to satisfaction with school as a work environment. Literature suggests that these two aspects, as well as a composite measure of overall job satisfaction, have been supported in subsequent studies (Admiraal & Kittelsen Røberg, 2023). Recent literature indicates that a combination of teachers' burnout and job satisfaction is linked to their intention to leave the profession (Holmström et al., 2023). However, most studies use a variable-centred approach, while

research employing a person-centred one is limited. Yet, the latter approach offers valuable insights into the different configurations of variables among various subpopulations within a sample (Morin et al., 2018). Insight into patterns of simultaneous presence of work engagement and burnout could be an additional pathway to obtaining a more refined insight into the complexity of teachers' well-being.

## Present study

The aim of this study was to explore and identify different profiles of early-career teachers based on two opposing indicators of teachers' well-being: work engagement and burnout. Using a person-centred approach, a latent profile analysis was employed to identify patterns of well-being indicators, thereby grouping teachers according to combined levels of their work engagement and burnout. This is one of few studies identifying profiles of work engagement and burnout, and the first one focusing on early-career teachers. Given the exploratory nature of this research, detailed hypotheses regarding the specific number and characteristics of distinct profiles were not defined. Considering the relatively high average values of work engagement and low values of burnout among teachers, it was more broadly hypothesised that distinct teachers' profiles of well-being would emerge. Further, it was hypothesised that these profiles would differentiate those with high occupational well-being (characterised by high work engagement and low burnout) from those whose well-being might be at risk.

Additionally, this study also examined the differences among identified profiles of teachers concerning their job satisfaction and planned persistence in the profession as outcomes. It was assumed that profiles characterised by high level of burnout and lower level of work engagement would be associated with reduced job satisfaction and uncertainty regarding the intention to stay in the profession.

## METHOD

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### Procedure and sample

The data was collected *via* an online questionnaire distributed to all elementary schools in Croatia during school year 2022/2023. School principals helped in distributing the questionnaire to all early-career subject teachers currently employed at their school. A total of 590 early-career subject teachers (81.3% female) from 280 elementary schools in Croatia participated in the study. Teachers had up to five years of teaching experience, averaging 2.65 years ( $M = 31.8$  months,  $SD = 17.76$ ), and taught 17

different school subjects. Participation in the study was on a voluntary basis and the study adhered to all ethical standards. Ethical approval was obtained by the Ethical committee of Institute for Social Research in Zagreb and the study was conducted with the consent of the Croatian Ministry of Science, Education and Youth.

## Instruments

Work engagement was measured with *Engaged Teacher Scale* (ETS; Klassen et al., 2013). ETS measures four dimensions of work engagement: emotional (e.g., "I feel happy while teaching."), cognitive (e.g., "I try my hardest to perform well while teaching."), social with students (e.g., "In class, I show warmth to my students.") and social with colleagues (e.g., "At school, I connect well with my colleagues."). Each subscale consists of four items and the answers are given on a frequency scale ranging from 1 (Never) to 5 (Always).

The level of experienced professional burnout was assessed using *Burnout Assessment Tool* (BAT-23; Schaufeli et al., 2020). BAT measures four burnout symptoms: exhaustion (e.g., "At work, I feel mentally exhausted."), mental distance (e.g., "I struggle to find any enthusiasm for my work."), cognitive impairment (e.g., "At work, I have trouble staying focused.") and emotional impairment (e.g., "At work, I feel unable to control my emotions."). The exhaustion subscale consists of eight items, and the three other subscales of five items each. The answers are given on a frequency scale ranging from 1 (Never) to 5 (Always).

Job satisfaction was measured with *Teachers' Job Satisfaction Scale* adapted for TALIS (OECD, 2019). It consists of two subscales: job satisfaction with work environment (e.g., "I enjoy working at this school.") and job satisfaction with profession (e.g., "If I could decide again, I would still choose to work as a teacher."). Each subscale consists of four items and answers are given on a Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree).

Persistence in teaching profession was assessed with one item from Watt and Richardson's scale (2008): "How sure are you that you will stay in the teaching profession?". Answers ranged from 1 (Not at all) to 7 (Extremely).

Internal reliability coefficients (Cronbach's alpha) for all measures are presented in Table 1.

## Statistical analysis

Statistical analyses were conducted in three steps using Mplus v.8.11 (Muthén & Muthén, 1998–2017).

In the first step, descriptive statistics and bivariate Pearson correlations were calculated for all measures. Additional-

ly, the structural validity of all measures was assessed using confirmatory factor analysis (CFA). Several fit indices were considered to evaluate model fit: Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR). A good model fit was indicated by  $TLI \geq 0.95$ ,  $CFI \geq 0.95$ ,  $RMSEA < 0.06$ , and  $SRMR \leq 0.06$ , while an adequate model fit was indicated by  $TLI \geq 0.90$ ,  $CFI \geq 0.90$ ,  $RMSEA < 0.08$ , and  $SRMR \leq 0.08$  (Hu & Bentler, 1999; Schreiber et al., 2006).

In the second step, work engagement and burnout profiles were identified using latent profile analysis (LPA). Four aspects of work engagement and four symptoms of burnout were used as indicators for profile identification. Models with up to six profiles were tested using 500 random starts, 50 iterations each and 50 best solutions retained, to avoid local maxima. The best-fitting model was selected based on multiple criteria, including information criteria (AIC, BIC, SABIC), a relative fit index (BLRT), minimal and theoretical meaningfulness (Nylund-Gibson & Choi, 2018). Specifically, lower AIC, BIC, and SABIC values, along with higher entropy ( $> 0.70$ ), indicated a better model fit (Wang et al., 2017). Additionally, a scree plot of AIC, BIC, and SABIC values was examined to identify the point where the decrement in values diminished with each additional profile (Nylund-Gibson & Choi, 2018). The bootstrapped likelihood ratio test (BLRT) was also conducted, where statistical significance indicated that a model provided a significantly better fit than the model with  $k-1$  profiles (Asparouhov & Muthén, 2012). To prevent the emergence of statistical artefact profiles, the size of the smallest profile in each model was considered, ensuring that it constitutes at least 5% of the sample (Spurk, 2020). Finally, theoretical meaningfulness and model parsimony were also considered when selecting the model (Spurk et al., 2020). To gain a deeper understanding of the profiles, a Wald test was conducted to examine statistically significant differences in all indicators across profiles. Bonferroni correction was applied to account for multiple comparisons and reduce the risk of Type I error (Armstrong, 2014).

In the third step, differences in distal outcomes (job satisfaction and planned persistence in the teaching profession) across identified profiles were examined using the automatic Bolck-Croon-Hagenaars (BCH) approach implemented in Mplus (Asparouhov & Muthén, 2021). This approach was chosen because it has been shown to produce the most robust results when distal outcomes are not normally distributed (Shin et al., 2019).

## RESULTS

TABLE 1  
Descriptive statistics  
and Pearson  
correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11
1 Emotional engagement	1										
2 Social engagement with colleagues	0.500**	1									
3 Cognitive engagement	0.666**	0.533**	1								
4 Social engagement with students	0.582**	0.563**	0.619**	1							
5 Exhaustion	-0.553**	-0.257**	-0.386**	-0.306**	1						
6 Psychological distancing	-0.652**	-0.351**	-0.483**	-0.418**	0.724**	1					
7 Cognitive impairment	-0.520**	-0.283**	-0.499**	-0.374**	0.687**	0.701**	1				
8 Emotional impairment	-0.408**	-0.274**	-0.427**	-0.320**	0.619**	0.581**	0.703**	1			
9 Job satisfaction with work environment	0.511**	0.371**	0.337**	0.243**	-0.459**	-0.510**	-0.355**	-0.359**	1		
10 Job satisfaction with profession	0.583**	0.314**	0.343**	0.346**	-0.567**	-0.655**	-0.452**	-0.348**	0.570**	1	
11 Persistence in the profession	0.481**	0.274**	0.271**	0.261**	-0.455**	-0.540**	-0.363**	-0.270**	0.380**	0.679**	1
M	4.44	4.13	4.54	4.27	2.22	1.81	1.70	1.61	4.20	3.82	5.34
SD	0.61	0.57	0.48	0.59	0.67	0.59	0.55	0.53	0.79	0.94	1.59
$\alpha$	0.91	0.74	0.82	0.83	0.89	0.77	0.85	0.79	0.88	0.86	-

Note: \*\* $p < 0.001$ .

Early-career teachers reported work engagement and satisfaction with their work environment and profession above the mid-point of the scales used, burnout symptoms below the mid-point, and a high level of planned persistence in the teaching profession. Intercorrelations among aspects of work engagement and among the four burnout symptoms were moderate to high and positive. As expected, work engagement and burnout symptoms were moderately and negatively correlated. All correlations between professional well-being (work engagement and burnout), and distal outcomes (job satisfaction and planned persistence in the profession) were significant, low to moderate in strength, and in the expected direction. All measures demonstrated acceptable to high reliability, with Cronbach's  $\alpha$  exceeding 0.70 for all scales.

To assess the structural validity of the measures, confirmatory factor analysis (CFA) was conducted. The model with four interrelated aspects of work engagement demonstrated a good fit to the data (TLI = 0.94, CFI = 0.95, RMSEA = 0.07, SRMR = 0.04), with high standardised factor loadings (minimum  $\lambda$  = 0.566). The measurement model with four interrelated burnout symptoms showed an acceptable fit (TLI = 0.89, CFI = 0.90, RMSEA = 0.07, SRMR = 0.05), with high standardised factor loadings (minimum  $\lambda$  = 0.425). Finally, the model with two interrelated aspects of job satisfaction demonstrated an acceptable fit, apart from a high RMSEA (TLI = 0.92, CFI = 0.88, RMSEA = 0.14, SRMR = 0.08). Moreover, all items had high standardised factor loadings (minimum  $\lambda$  = 0.668), indicating that they effectively capture the two aspects of job satisfaction.

The model fit information of six LPA models is presented in Table 2. The size of the smallest profile was acceptable for all solutions (> 5 % of the sample), except for the six-profile model. Since the BLRT was significant for all models, it was not informative in selecting the optimal model. AIC, BIC, and SABIC indices decreased with each additional profile; however, the scree plot presented a diminishing point of decrement at the three-profile model (Appendix 1). Additionally, the three-profile model demonstrated the highest entropy. For this model, average posterior probabilities of class membership in the target profile varied from 0.933 – 0.990 ( $M$  = 0.958), and cross-probabilities were low (0.025 – 0.051,  $M$  = 0.037), indicating high reliability of classification into profiles. An examination of the identified profiles across models revealed that more complex models produced profiles qualitatively similar to those in the three-profile solution, hence not providing new meaningful information to the model. Considering all the aforementioned factors, the three-profile model was retained.

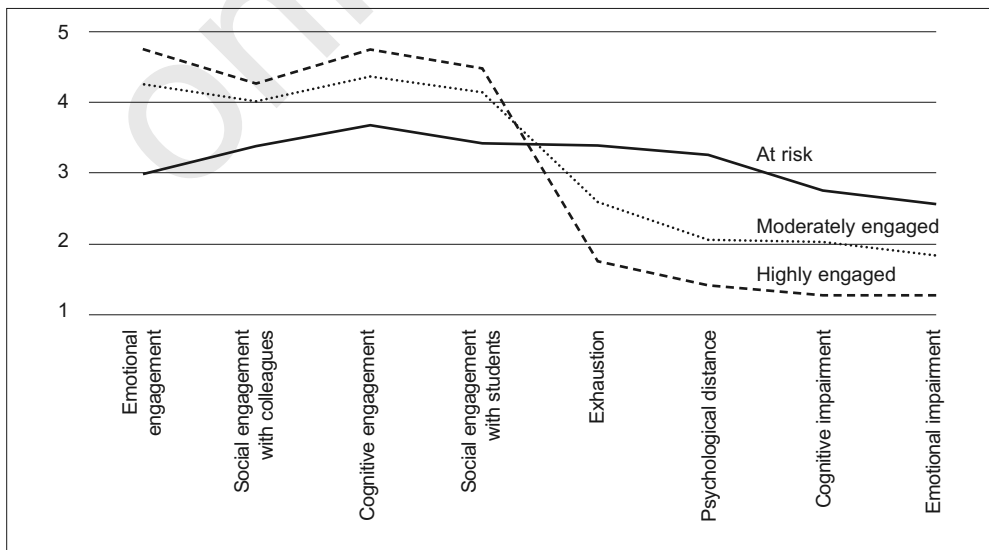
☛ TABLE 2  
Fit indices of the tested  
latent profile models

Model ( <i>k</i> profiles)	Model fit indices			Min %	BLRT ( <i>p</i> )	Entropy
	AIC	BIC	SABIC			
1	8127.021	8197.103	8146.309	-	-	
2	6794.427	6903.930	6824.563	33.85	< 0.001	0.873
3	<b>6184.524</b>	<b>6333.448</b>	<b>6225.510</b>	<b>6.00</b>	<b>&lt; 0.001</b>	<b>0.886</b>
4	5951.365	6139.711	6003.200	5.43	< 0.001	0.835
5	5753.102	5980.868	5815.785	5.42	< 0.001	0.846
6	5584.239	5851.427	5657.772	0.17	< 0.001	0.866

Note: Fit indices for the chosen model are presented in bold.

The three-profile model is depicted in Figure 1. The first profile (50.30 %,  $n = 297$ ), labelled *Highly engaged teachers*, is characterised with high levels of work engagement ( $M = [4.32 - 4.78]$ ) and low levels of burnout ( $M = [1.29 - 1.78]$ ). The second profile (43.70 %,  $n = 258$ ) is labelled as *Moderately engaged teachers* and is qualitatively similar to the highly engaged profile, but has lower levels of work engagement ( $M = [4.02 - 4.39]$ ) and higher levels of burnout ( $M = [1.85 - 2.58]$ ). The final profile (6.00 %,  $n = 35$ ), labelled as *Teachers at risk*, is characterised with around average values of both work engagement ( $M = [3.00 - 3.70]$ ) and burnout ( $M = [2.56 - 3.37]$ ). Highly and moderately engaged profiles, exhibited relatively lower levels of social engagement (both with students and colleagues) compared to other work engagement dimensions, as well as relatively higher level of exhaustion in comparison to other burnout symptoms. At risk profile exhibited relatively higher levels of cognitive engagement in comparison to other work engagement dimensions and higher levels of exhaustion and psychological distance in comparison to cognitive and emotional impairment.

☛ FIGURE 1  
Mean levels of work  
engagement dimen-  
sions and burnout  
symptoms in the three  
latent profiles



To gain a deeper understanding in the quantitative differences between the three profiles, mean levels of eight indicators were compared across the profiles. The results of pairwise comparisons are presented in Appendix 2. All comparisons were statistically significant (at  $p < 0.001$ ), indicating that the three profiles quantitatively differ in mean level of all work engagement dimensions and all burnout symptoms.

Lastly, differences in distal outcomes (persistence in teaching profession and job satisfaction) were examined across profiles. The overall Wald test indicated significant differences in planned persistence in the teaching profession ( $\chi^2 = 148.819$ ,  $p < 0.001$ ), job satisfaction with profession ( $\chi^2 = 255.373$ ,  $p < 0.001$ ) and job satisfaction with work environment ( $\chi^2 = 118.228$ ,  $p < 0.001$ ) across profiles. Further pairwise comparisons revealed that the differences among all profiles in the three distal outcomes are statistically significant (Table 3). Highly engaged teachers reported the highest persistence in the teaching profession, followed by moderately engaged teachers, while teachers at risk had the lowest persistence. Similarly, highly engaged teachers exhibited the highest job satisfaction with both teaching profession and work environment, followed by moderately engaged teachers, and with teachers at risk reporting the lowest satisfaction.

**TABLE 3**  
Means, standard errors and statistically significant differences in distal outcomes across three latent profiles

Distal outcome		Profile		
		Highly engaged teachers (a)	Moderately engaged teachers (b)	Teachers at risk (c)
Persistence in the teaching profession	<i>M (SE)</i>	6.02 (0.077) <sup>bc</sup>	4.88 (0.100) <sup>ac</sup>	2.98 (0.297) <sup>ab</sup>
Job satisfaction with the profession	<i>M (SE)</i>	4.51 (0.040) <sup>bc</sup>	4.00 (0.049) <sup>ac</sup>	3.02 (0.167) <sup>ab</sup>
Job satisfaction with work environment	<i>M (SE)</i>	4.33 (0.045) <sup>bc</sup>	3.45 (0.055) <sup>ac</sup>	2.34 (0.148) <sup>ab</sup>

Note: Subscripts denote profiles which differ significantly at  $p < 0.001$ .

## DISCUSSION

The results of this study provide a closer insight into early-career subject-teachers' well-being profiles in terms of specific patterns of engagement and burnout. The identified profiles distinguish between teachers who have a preferable level of occupational well-being and those whose levels of engagement and burnout are somewhat departing. On average, teachers from this sample demonstrate higher levels of work engagement and lower levels of burnout, aligning with previous studies (e.g. Holström et al., 2023; Salmela-Aro et al., 2019; Van der Vaart & De Beer, 2021). Interestingly, the previously identified profile characterised by both high burnout and high

work engagement (e.g., Salmela-Aro et al., 2019) was not observed among Croatian early-career teachers. In addition, by analysing profiles of highly educated employees, Innanen et al. (2014) found that highly educated employees are more likely to fall into engaged profile rather than in the exhausted-workaholic one, and similarly, Boersma and Lindblom (2009) reported that highly educated employees are generally more engaged and committed. Considering that subject teachers are highly educated, the obtained results regarding the prevalence of the highly engaged profile in this study align with previous findings from a few studies that have implemented a person-centred approach to teacher well-being. More specifically, the identified profiles show some similarities to the three profiles identified in a sample of Finnish teachers, where the engaged profile was also found to be the most common (Holström et al., 2023). On the other hand, Salmela-Aro et al. (2019) found that the most prevalent profile among Finnish teachers was the one characterised by high levels of both engagement and burnout. Additionally, Herman et al. (2020) explored profiles based on the levels of stress and coping of middle school teachers in the USA, and obtained that two out of three profiles are characterised by high stress.

Consistent with previous research (e.g. Madigan & Kim, 2021; Skaalvik & Skaalvik, 2018), the obtained findings highlight the essential role of teachers' occupational well-being for their job satisfaction and intention to remain in the profession. This is particularly important in the early years of teaching, in line with evidence that early-career teachers' work engagement is positively related to their job satisfaction (Høigaard et al., 2011; Wang et al., 2024). Furthermore, this aligns with recent meta-analytic findings on employees across various sectors, showing that work engagement positively correlates with job satisfaction and negatively with turnover intentions (Mazzetti et al., 2023).

Although, on average, teachers in the overall sample reported high levels of work engagement and low levels of burnout, three distinct profiles significantly differed in levels of work engagement aspects and burnout symptoms. In this manner, the profile of teachers at risk represents the most vulnerable group, given that their occupational well-being seems to be diminished soon after entering the profession. Consequently, these teachers report lower job satisfaction and are least convinced to stay in the profession. This finding calls for additional attention in practice, given that turnover intentions tend to remain rather consistent over time (Rasanen et al., 2020).

Furthermore, from the perspective of the JD-R model, job resources play a crucial role when facing high job demands (Granziera et al., 2021). Given that early-career teachers encounter high demands in terms of new challenges and lack of

practical experience, additional support from colleagues and school principals can significantly contribute to their well-being and future career plans. Empirical evidence indicates that job resources such as supervisor support and organisational climate can significantly buffer the adverse effects of job demands on teacher work engagement (Bakker et al., 2007). According to Schaufeli and Bakker (2004), different patterns of causes and consequences of burnout imply the need for different intervention strategies in terms of reducing burnout and/or enhancing engagement. Therefore, a clear understanding of the similarities and differences among various well-being profiles of teachers could help in developing tailored, more nuanced interventions that are grounded on novice teachers' individual experiences. Since early years of teaching are a critical period for the transition into the profession and future career plans, it is important to timely identify teachers who are at risk and provide them with adequate, tailored support. Intentions to leave the profession increase when job demands exceed available job resources (Madigan & Kim, 2021). Therefore, providing timely interventions is crucial for avoiding teacher attrition in the early years of their career. Our findings suggest that interventions aimed at developing teachers' resilience to stress and burnout, as well as enhancing their work engagement, could be particularly beneficial for novice teachers, supporting their job satisfaction and long-term commitment to the profession. Such support is even more critical in the light of increasing challenges with the recruitment and retention of subject teachers.

## Limitations

Our study has several limitations that refer to the sampling and data collection procedure. Invitations were sent to all elementary schools in Croatia, requesting them to identify teachers up to five years in teaching and ask them to participate in the study. However, precise data on the number of early-career teachers in elementary schools in Croatia are unavailable. We estimate that the teacher response rate was approximately 50%. Our sample is likely influenced by self-selection bias, as teachers who chose to participate may be those who are highly motivated and more resilient to stress, potentially reducing the variability of well-being variables. The second limitation of our study is the use of self-report instruments to assess the elements of well-being, which could lead to acquiescence bias in responding and further reduce the data variability. Future research could address these limitations using observer ratings, or complementary student data to assess teacher engagement. The cross-sectional nature of our data further limits the conclusions about the temporal ordering of the relations between well-being and its outcomes. Longitudinal studies could assess

job satisfaction and career intentions among profiles of early-career teachers at various time-points, providing insights into the long-term role of work engagement and stress in their teaching experiences and career trajectories.

## CONCLUSIONS

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Using a person-centred approach, three different profiles of teachers based on their levels of work engagement and burn-out were identified in this study: highly engaged teachers, moderately engaged teachers, and teachers at risk. Additionally, analysis of differences in job satisfaction and planned persistence in the teaching profession across the three profiles indicated that highly engaged teachers reported the highest persistence in the profession, while teachers at risk demonstrated the lowest persistence. Similarly, highly engaged teachers reported the highest job satisfaction, while teachers at risk expressed the lowest satisfaction. Our findings align with previous variable-centred research, underscoring the importance of two complementary aspects of occupational well-being – work engagement and burnout – in relation to teachers' job satisfaction and career plans. The main strength of our study is the use of the person-centred approach, which allows for a simultaneous analysis of various aspects of well-being in profiling the subgroups of teachers in our sample. This approach enables the identification of teachers who are particularly at risk of diminished well-being.

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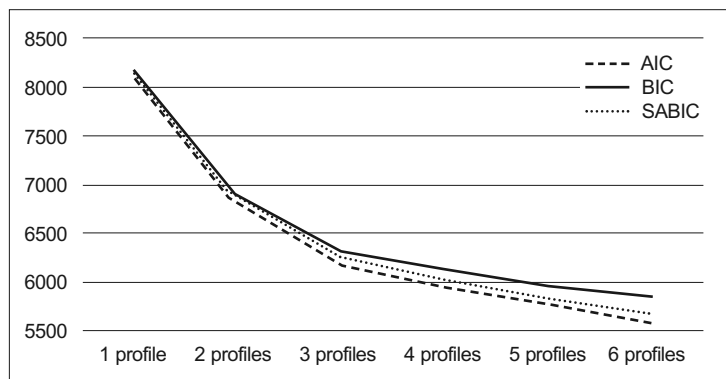
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## APPENDIX

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1

Scree plot of model fit indices AIC, BIC and SABIC



Results of pairwise comparisons (Wald test) of work engagement aspects and burnout symptoms between the three latent profiles

Indicator	Comparison		$\chi^2$	df	p
	Profile 1	Profile 2			
Emotional engagement	Highly engaged	Moderately engaged	32.420	1	< 0.001
	Highly engaged	At risk	134.188	1	< 0.001
	Moderately engaged	At risk	81.078	1	< 0.001
Social engagement with colleagues	Highly engaged	Moderately engaged	18.068	1	< 0.001
	Highly engaged	At risk	45.773	1	< 0.001
	Moderately engaged	At risk	21.095	1	< 0.001
Cognitive engagement	Highly engaged	Moderately engaged	42.974	1	< 0.001
	Highly engaged	At risk	43.715	1	< 0.001
	Moderately engaged	At risk	19.066	1	< 0.001
Social engagement with students	Highly engaged	Moderately engaged	27.483	1	< 0.001
	Highly engaged	At risk	64.058	1	< 0.001
	Moderately engaged	At risk	25.306	1	< 0.001
Exhaustion	Highly engaged	Moderately engaged	237.191	1	< 0.001
	Highly engaged	At risk	189.112	1	< 0.001
	Moderately engaged	At risk	57.890	1	< 0.001
Psychological distance	Highly engaged	Moderately engaged	302.728	1	< 0.001
	Highly engaged	At risk	209.971	1	< 0.001
	Moderately engaged	At risk	103.477	1	< 0.001
Cognitive impairment	Highly engaged	Moderately engaged	315.269	1	< 0.001
	Highly engaged	At risk	172.866	1	< 0.001
	Moderately engaged	At risk	51.093	1	< 0.001
Emotional impairment	Highly engaged	Moderately engaged	171.483	1	< 0.001
	Highly engaged	At risk	72.975	1	< 0.001
	Moderately engaged	At risk	23.594	1	< 0.001

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## Napredovati ili preživjeti? Profili radne angažiranosti i sagorijevanja učitelja u ranoj fazi karijere

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Cilj ovog rada bio je identificirati profile učitelja u ranoj fazi karijere na temelju njihove profesionalne dobrobiti, odnosno radne angažiranosti i sagorijevanja, te ispitati razlike u zadovoljstvu poslom i namjeri ostanka u učiteljskoj profesiji između profila. Ukupno 599 predmetnih učitelja do pet godina radnog iskustva u nastavi ispunilo je mrežni upitnik kojim su procjenjivali svoju profesionalnu dobrobit i povezane ishode. Analizom latentnih profila identificirana su tri distinktivna profila učitelja: visoko angažirani (50,3 %), umjereno angažirani (43,7 %) i u riziku (6,0 %). Dok su visoko i umjereno angažirani učitelji iskazali visoke, odnosno umjerene razine radne angažiranosti i niske razine sagorijevanja, učitelje u riziku karakterizirale su prosječne razine obaju pokazatelja. Učitelji visoko angažiranoga profila iskazali su najveće zadovoljstvo poslom i najveću namjeru ostanka u profesiji, potom su slijedili učitelji umjereno angažiranoga profila, dok su učitelji u riziku iskazali najniže razine zadovoljstva i namjere ostanka. Ovi rezultati potvrđuju ranija istraživanja, naglašavajući ključnu ulogu profesionalne dobrobiti u poticanju zadovoljstva poslom učitelja i njihova zadržavanja u profesiji.

Ključne riječi: profesionalna dobrobit učitelja, radna angažiranost, sagorijevanje, učitelji u ranoj fazi karijere, pristup usmjeren na osobu



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