



*Journal of the Institute for Educational Research*  
Volume 54 • Number 1 • June 2022 • 83–101  
UDC 316.644:796(497.5)  
159.947.5.072

ISSN 0579-6431  
ISSN 1820-9270 (Online)  
<https://doi.org/10.2298/ZIPI2201083L>  
Original research paper

## **TEACHERS' WORK ENGAGEMENT: THE CONTRIBUTION OF DEMOGRAPHIC, WORK-RELATED, AND SOCIAL FACTORS**

**Maja Ljubetić**

*Department of Pedagogy, Faculty of Humanities and Social Sciences, University of Split, Croatia*

---

**Toni Maglica\***

*Department of Early and Preschool Education, Faculty of Humanities and Social Sciences, University of Split, Croatia*

---

**Ina Reić Ercegovac**

*Department of Psychology, Faculty of Humanities and Social Sciences, University of Split, Croatia*

---

### **ABSTRACT**

This research aimed to investigate which factors contribute to the work engagement of preschool, elementary, and middle school teachers in Croatia. Factors contributing to work engagement include social, work-related factors, and demographic characteristics. A total of 548 teachers participated in the research. The results indicated differences in work engagement between the three groups of teachers, with preschool and primary teachers reporting higher absorption and dedication compared to middle school teachers. The length of working experience was positively related to vigour and absorption. As for the social factors, children and parents proved to be factors contributing significantly to work engagement, while administration and colleagues did not prove relevant for any component of work engagement. It is possible to conclude that quality work with children and parents contributes to higher engagement, as does job security and lack of time pressure at work.

---

### **Key words:**

Work engagement, preschool teachers, primary school teachers, middle school teachers.

---

\* E-mail: [tmaglica@ffst.hr](mailto:tmaglica@ffst.hr)

## ■ INTRODUCTION

Shifting the focus of traditional psychology from disease, impairment, disorder, and disability to “human strength and optimal functioning”, which are the focus of positive psychology (Seligman & Csikszentmihalyi, 2000, as cited in Schaufeli, Bakker & Salanova, 2006: 701), has enabled a more complete insight into the behaviour of individuals and the resources available to them in challenging situations. One such positive approach relates to the study of work engagement of educational workers as a kind of antipode of the often-researched burnout phenomenon (Schaufeli, Bakker & Salanova, 2006). This approach seems understandable because the tasks and job challenges of teachers, as well as the overall work environment and climate, can present a possible source of either stress or support for practitioners (Duggan, 1997; Ferguson, Mang & Frost, 2017; Ramberg, Brodin Låftman, Åkerstedt & Modin, 2020).

The concept of work engagement, which includes both affective and cognitive components, consists of three interrelated elements: vigour, dedication, and absorption. It represents a uniquely positive, fulfilling work-related state of mind (Schaufeli & Bakker, 2004), and reflects an individual’s attitude toward work. An individual with high work engagement sees their job as motivating and stimulating and as something they want to dedicate themselves to the maximum, sparing no time and effort. The dedication includes the meaning and importance of the job for the individual, and absorption includes the lack of time control (“time seems to fly”), where individuals most often “forget everything else around them”, are filled with a sense of happiness when immersed in work, and when working intensely they are carried away and find it difficult to detach themselves from their job (Schaufeli & Bakker, 2004). Earlier research conducted on Croatian samples of teachers has shown that higher work engagement contributes to greater job satisfaction, as well as lower burnout, especially emotional exhaustion and alienation (Slišković, Burić & Knežević, 2016).

Worrying data on the percentage of non-engaged teachers as a result of stress and/or burnout can be found in the literature (for example, Salmela-Aro, Hietajärvi & Lonka, 2019, found that 70% of teachers belong to the “engaged-burnout” profile group and only 30% to the “engaged” profile group), however, there are encouraging research findings that point to the strengths and defence forces of individuals (Addimando, 2019). Here, it is important to emphasize that most teachers are not anxious, stressed, and unmotivated, but quite the opposite. The vast majority of them are satisfied and enthusiastic and find their work rewarding and satisfying (Hakannen, Bakker & Schaufeli, 2006). In a study by Salmela-Aro *et al.* (Salmela-Aro K, L., Hietajärvi L. & Lonka, 2019), it was found that a group of engaged teachers had more job and personal resources, such as control and resilience, as opposed to an engaged-burnout profile group who experienced a greater/heavier workload. Hutell and Gustavsson (2011) point out that job demands on the one hand and resources

on the other, as well as the interference between private life and work, made up the largest amount of the explained difference in burnout and work engagement. Job demands were more strongly associated with burnout, while job resources were more strongly associated with work engagement. Predictors with the greatest relative impact on burnout and work engagement were unfulfilled expectations and skill mastery. The results of this research support the importance of the impact of work context on burnout and work engagement.

Many studies (Sandilos & Di Perna, 2022; Sandilos, Goble, Rimm-Kaufman & Pianta, 2018) confirm that social factors (children/students, parents, colleagues, and administration) and work-related factors: (in)security, time pressure and (im)possibility of professional development (Badri, Alnuaimi, Mohaidat, Yang & Al Rashedi, 2016; Forcella, Di Donato, Reversi, Fattorini, & Boscolo, 2009; Maas, Schoch, Scholz, Rackow, Schüler, Wegner & Keller, 2021) significantly affect the occupational satisfaction of educational workers, their work engagement (dedication, vigour, and absorption), success in dealing with stress (Ljubetić, Maglica & Grčić, 2021), and burnout resistance (Herman, Hickmon-Rosa & Reinke, 2017; Kokkinos, 2007; Minghui, Lei, Xiaomeng & Potmešilc, 2018; Reinke, Herman, K. C. & Stormont, 2013; Toropova, Myrberg & Johansson, 2021).

Defining the five stress causes for teachers, Harmsen, Helms-Lorenz, Maulana, and van Veen (2018) report that high psychological demands for task performance, negative social aspects, negative organizational aspects, lack of developmental opportunities, and negative aspects of students have a positive and significant correlation with one or more teacher stress responses. When these stress causes are assessed together, high psychological demands, negative aspects of students, and negative social aspects are stronger and more stable predictors of teacher stress responses. Here, the negative aspects of students are significantly and positively associated with teacher tension, negative emotions, and dissatisfaction. Addimando (2019) concludes that teachers who perceive a supportive and satisfying work environment (in terms of internal and external resources) are more likely to be more engaged in their activities, which in turn leads to a more heterogeneous array of teaching practices with students, making it possible to expect greater student motivation for learning. The researchers' focus on teacher engagement issues is justified if we consider the fact that a satisfied and engaged person not only behaves better in teaching (Bakker, Schaufeli, Leiter & Taris, 2008) but also has an impact on later student learning (Mercer, 2010). These results are supported by the findings by Skaalvik and Skaalvik (2016), who indicated two main reasons that motivate teachers to leave the teaching profession: a) long-term emotional stress and exhaustion, and b) lack of support and trust, poor student motivation for engagement, and classroom conflicts.

The effects of constant exposure to occupational stress and the effects of burnout are directly reflected in the work engagement of teachers (Salmela-Aro, Hietajärvi & Lonka, 2019), which negatively affects the quality of their teaching and student outcomes (Jeon, Buettner, Grant & Lang, 2019). It is possible to assume that improving school ecology would very likely improve the sense of teacher well-being (Sandilos & DiPerna, 2022) and thus have a positive impact on the institution in which the individual works as well as the entire educational system (Duggan, 1997).

In an extensive study based on the Job Demands-Resources (JD-R) Model, Hakannen, Bakker, and Schaufeli (2006) detected three main causes of teacher psychological workload arising from job demands: disruptive pupil behaviour, work overload, and a poor physical work environment. Moreover, these authors emphasize that resources relate to the physical, psychological, social, and organizational aspects of the job, that they require cognitive and emotional efforts of the individual and are therefore associated with certain physiological and/or psychological costs. Hakannen *et al.* (Hakannen, Bakker & Schaufeli, 2006) detected five resources that are the major motivators increasing commitment or engagement, but, at the same time, when lacking, act as factors that increase burnout: job control, access to information, supervisory support, innovative school climate, and the overall social climate. The authors of the study conclude that “high job demands and a lack of job resources form the breeding ground for burnout and reduced work engagement, respectively” (Hakannen, Bakker & Schaufeli, 2006: 497).

## ■ METHODOLOGY

### *Research aim and questions*

The research aimed to investigate which factors contribute to the teacher work engagement and in what way. The research attempted to answer the following research questions:

1. Do preschool, primary and middle school teachers differ in their work engagement (vigour, dedication and absorption)?
2. Do preschool, primary and middle school teachers differ in assessing the factors of their work environment (job security, time pressure, and professional development) and social factors (parents, students, colleagues, and administration)?
3. Do sociodemographic characteristics, work environment factors (job security, time pressure, and professional development), and social factors (parents, students, colleagues, and administration) contribute to explaining individual differences in focus, dedication, and absorption?

### *Research sample*

A total of 548 teachers from Croatia participated in the research, including 260 preschools, 92 primary school, and 196 middle school teachers. The mean age of the participants was 43.12 years (range 23–64 years). The mean length of working experience was 17.13 years (range 0.5–41 years). Moreover, the sample included 514 women and 32 men, while two participants did not identify as female or male. The majority of participants ( $n = 327$ ) indicated higher secondary education (undergraduate study) as their highest level of education, and  $n = 200$  participants had a bachelor's degree or college-level education. Considerably fewer participants had a university specialist degree or an academic masters or doctoral degree. Slightly more than 82% of participants ( $n = 452$ ) were employed full time,  $n = 47$  were employed as substitute [supply] preschool or primary school teachers at the time of the survey, and  $n = 49$  were part time employed. The majority of participants identified as married or partnered ( $n = 431$ ),  $n = 87$  as single, and  $n = 25$  as divorced. Widows/widowers were least represented ( $n = 5$ ) in the sample.

### *Instruments*

*The General Sociodemographic Questionnaire* was designed for the research and consisted of eight questions about the sociodemographic characteristics of participants, including gender, age, length of working experience, the level of education, employment status, marital status, and the number of children.

*The Questionnaire for Examining Measures of Strengths, Supports, And Stressors for Teachers* (MOST, Sandilos & DiPerna 2021) is intended to examine 10 constructs relevant to teachers' jobs, which can be either a support or a source of stress, encompassing the factors of work environment (job security, time pressure, and professional development) and social factors (parents, students, colleagues, and administration). The questionnaire comprises a total of 58 items, divided into 10 subscales: School leaders (e.g. *My school leaders discuss classroom issues with me*), Parents of my students/children (e.g. *Parents of my students are open to discussing the difficulties their children have in school*), Students (e.g. *In the school where I work I have enough opportunities to adequately support my students who are different in terms of their race/culture/ethnicity*), Students with disabilities (e.g. *In the school where I work I have enough opportunities to meet the academic needs of my students with learning difficulties*), Colleagues (e.g. *My colleagues plan classes together*), Time pressure (e.g. *I have enough time during my classes to support each student*), professional development (e.g. *The professional development offered to me improves my effective classroom management competency*), Security (e.g. *I feel safe in my school*), Belonging (e.g. *I feel respected in my school*), and Emotional state (e.g. *I feel satisfied with the fact that I am doing precisely this job*). The participants' task for each item

was to assess the frequency of the experience or behaviour described in the items on a 1–5-point rating scale, where 1- means never, 2- rarely, 3- sometimes, 4- often, and 5- almost always. Seven subscales were used in this research: administration, colleagues, students /students with disabilities, security, time pressure, and the possibility of professional development. A higher score on each subscale indicates a more positive assessment of the categories. All subscales had high reliability, which, together with other psychometric characteristics, is shown in Table 1.

*The Work Engagement Questionnaire* (Schaufeli & Bakker, 2004; Slišković, Burić & Knežević, 2016) is intended to measure three characteristics: vigour, dedication, and absorption. Vigour refers to energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. Dedication refers to being involved in one's work, finding meaning in one's work, being challenged, and experiencing a sense of enthusiasm, inspiration, and pride. Absorption refers to being fully concentrated and engrossed in one's work, whereby time passes quickly, and one has difficulties detaching oneself from work. The questionnaire consists of 17 items, 6 of them examining vigour (e.g. *I can spend a long time working without a break*), 5 items examining dedication (e.g. *My job inspires me*), and 6 items examining absorption (e.g. *Time flies when I work*). The participant's task for each item was to estimate how often they feel in the way described in each item, and the evaluation was done by marking one of the offered seven numbers, where 0 meant never and 6 always or every day. Higher results on the subscales indicate higher engagement, i.e. higher vigour, dedication, and absorption. The psychometric characteristics of the subscales are shown in Table 1.

**Table 1:** The psychometric characteristics of the used measures

	No. of items	M	SD	Range	Cronbach $\alpha$	Skewness	kurtosis
Parents	5	17.30	3.34	5-25	.81	-.27	.06
Administration	8	27.94	7.25	8-40	.94	-.45	-.32
Colleagues	7	26.12	5.70	7-35	.94	-.49	-.09
Students/children	11	39.71	8.84	11-55	.96	-.48	.04
Time pressure	5	16.69	4.34	5-25	.83	-.11	-.46
Security	4	17.19	3.61	4-20	.87	-1.49	1.85
Professional development	5	15.40	4.60	5-25	.96	-.24	-.21
Vigour	6	27.82	5.04	5-36	.87	-1.10	1.68
Dedication	5	25.27	4.31	3-30	.90	-1.53	3.55
Absorption	6	28.77	5.38	1-36	.88	-1.22	2.72

### *Data collection and analysis*

The research was conducted in 2021 in an online form and sent to the participants via a link. Before the survey, the principals of schools and kindergartens were contacted and informed about the planned research implementation. They were notified about the approval of the Ethics Committee of the Faculty of Humanities and Social Sciences in Split regarding the ethics of the research, and they were asked to provide access to participants through official web addresses of kindergartens and schools. Participation in the research was voluntary and participants were allowed to withdraw at any time. They were guaranteed anonymity as the option of recognizing the sender's address was turned off, which they were informed about.

The collected data were analyzed using the STATISTICA14 software package. Descriptive parameters, correlation analysis, and hierarchical regression analyses were used in the research analysis to determine the contribution of individual groups of variables to the explanation of differences in work engagement.

## ■ RESULTS

To answer the first and second research problem, we compared the results of the three groups of participants (preschool, primary, and middle school teachers) concerning indicators of work engagement as well as the factors of work environment and social factors using one-way analyses of variance (Table 2). The results show that a significant main effect of the type of job was found for dedication and absorption as components of work engagement, while the difference in vigour was absent. Moreover, the type of job (whether you have a full contract, working on a project, or part time) proved to be significant for parents' support, administration support, and students as social factors, with time pressure as a work environment factor. The effect size ranged from small, to moderate, while the highest was determined for the parent variable.

**Table 2:** A comparison of preschool, primary, and middle school teachers about research variables (results of the one-way ANOVA)

	$M_{\text{preschool}}$	$Sd_{\text{preschool}}$	$M_{\text{primary}}$	$Sd_{\text{primary}}$	$M_{\text{middle}}$	$Sd_{\text{middle}}$	F (df)	Scheffe	effect size (partial $\eta^2$ )
Parents	3.54	.60	3.83	.54	3.18	.70	37.85*	pst>pt>mst	.12
Administration	3.22	.93	3.71	.80	3.75	.82	24.13*	pt<pst; pt<mst	.08
Colleagues	3.71	.85	3.66	.78	3.78	.78	.80	-	-
Students/children	3.74	.80	4.04	.71	3.93	.77	11.19*	pt<pst; pt<mst	.04
Time pressure	3.19	.87	3.59	.84	3.42	.85	8.89*	pt<pst; pt<mst	.03
Security	4.13	1.04	4.46	.72	4.44	.73	9.04*	pt<pst; pt<mst	.03
Professional development	3.00	.92	3.18	.92	3.14	.91	1.93	-	-
Vigour	4.63	.85	4.81	.78	4.56	.85	2.76	-	-
Dedication	5.15	.79	5.23	.81	4.84	.94	9.90*	mst<pt; mst<pst	.04
Absorption	4.85	.86	4.97	.89	4.64	.93	5.46*	mst<pt; mst<pst	.02

\*p&lt;.01; pt – preschool teachers; pst – primary school teachers; mst – middle school teachers

To answer the third research problem, three hierarchical regression analyzes were done with work engagement variables as criteria. In all analyses, the variables were introduced in three steps. In the first step, the job variable was introduced, followed by sociodemographic variables (gender, age, length of working experience, level of education), in the third step, work environment factors were added, and in the last step, social factors. The results of the performed analyzes are shown in Table 3.

**Table 3:** Results of hierarchical regressions with work engagement variables as criteria

	Vigour	Dedication	Absorption
1 <sup>st</sup> step			
Type of job	-.03	-.16**	-.10*
R (R <sup>2</sup> )	.03 (.001)	.16 (.03)	.10 (.01)
F (1,546)	.58	14.02**	5.83*
2 <sup>nd</sup> step			
Type of job	.00	-.10*	-.07
Gender	-.03	-.07	-.09
Length of working experience	.09*	.03	.11*
Level of education	-.05	-.08	-.04
R (R <sup>2</sup> )	.12 (.01)	.19 (.04)	.19 (.04)
ΔR <sup>2</sup>	.01	.01	.03*
F (4,543)	1.97	5.23**	4.93**
3 <sup>rd</sup> step			
Type of job	-.08	-.17**	-.12
Gender	-.05	-.08	-.09
Length of working experience	.11*	.05	.13**

Level of education	-.05	-.08	-.03
Security	.22**	.20**	.17**
Time pressure	.27**	.23**	.12**
Professional development	.14**	.08	.08
R (R <sup>2</sup> )	.47 (.22)	.42 (.18)	.33 (.11)
ΔR <sup>2</sup>	.21**	.14**	.07**
F (7,540)	22.27**	16.45**	9.33**
4. step			
Type of job	-.09	-.16**	-.11*
Gender	-.06	-.08*	-.09*
Length of working experience	.12**	.06	.13**
Level of education	-.04	-.06	-.02
Safety	.18**	.16**	.15**
Time pressure	.20**	.14**	.08
Professional Development	.05	-.02	.01
Parents	.04	.10*	.10*
Students	.15**	.15**	.08
Colleagues	.05	.04	-.01
Administration	.05	.06	.06
R (R <sup>2</sup> )	.50 (.25)	.46 (.21)	.36 (.13)
ΔR <sup>2</sup>	.04**	.03**	.02*
F (11,536)	16.36**	13.18**	7.16**

\*p&lt;.05; \*\*p&lt;.01

The analysis with vigour as a criterion showed that all selected predictors explain a total of 25% of the variance in the criterion, with significant independent predictors in the last step of the analysis being the length of working experience, security, time pressure, and students. Participants with longer working experience, a higher level of security in their school/kindergarten and their environment, who estimate that they have enough time to perform all tasks, and who see their work with students as a source of support and satisfaction showed a higher degree of work vigour. The analysis with dedication as a criterion showed that the predictors explain a total of 21% of the variance in the criterion, and the variables of type of job, gender, security, time pressure, parents, and students proved to be significant independent predictors in the last step of the analysis. Participants working at a lower level of the educational vertical, with a higher level of security in their school /kindergarten and their environment, who estimate that they have enough time to perform all tasks, and who see their work with students as a source of support and satisfaction showed a higher degree of dedication. Finally, analysis with absorption as a criterion showed that all predictors together explain 13% of the variance in the criterion, and in addition to the type of job and gender, security and parents proved to be significant independent predictors. Higher levels of absorption were expressed by preschool teachers and participants who see security and parents as sources of support in their work environment.

## ■ DISCUSSION

The research aimed to analyse the relationship between work engagement and sources of stress/support for preschool, primary school, and middle school teachers. In the following, we will first comment on the results indicating differences in the work engagement among the three groups of participants regarding the type of job. The results of the two components of work engagement - dedication and absorption - differed in terms of the type of job, whereby preschool teachers and primary teachers assessed these components of work engagement as higher compared to middle school teachers. A possible explanation for such results can be found first in the continuity that preschool teachers, and to a great extent primary school teacher, achieve in working with the same group of children/students over several years. Namely, during continuous work with the same group of children/students, preschool teachers and primary school teachers can monitor pupils' development and progress and adapt their work to student needs, which is at the same time a fulfilling experience and an experience that requires (greater) dedication. Another possible reason for greater dedication and absorption for these two groups of participants, in comparison with middle school teachers, most likely lies in their creative potential (Jukić, 2019), which they have to activate almost every day to

adapt the educational process to the requirements and specifics of teaching younger children/students. Also, it is very likely that during primary and preschool education and training, they attended a more comprehensive and diverse education program preparing them for the challenges of their future practice, which makes them more competent than middle school teachers for performing the above tasks. No less important seems to be the question of job motivation. Namely, preschool teachers and middle school teachers choose their job during their initial education at the tertiary level, while among the middle school teachers there is always a group of those who are not necessarily motivated to work in educational practice, but nevertheless for various reasons work in middle school. This is supported by the results of studies showing that primary school teachers are more satisfied with their work than middle school teachers (Koludrović, Jukić & Reić Ercegovac, 2009; Vidić, 2009), and job satisfaction is often significantly associated with work engagement (Slišković, Burić & Knežević 2016; Timms & Brough, 2013). Higher satisfaction, but also a higher level of dedication and absorption can, in addition to personal motivation, be attributed to better pedagogical-psychological-methodological training of preschool teachers and primary school teachers compared to middle school teachers' training. It is also possible that preschool and primary teachers, due to different education and teaching methods compared to subject teachers, know better the needs and possibilities of children/students, which contributes to their self-realization.

Among social factors, parental support was rated the highest by primary school teachers, followed by preschool teachers, but was rated lowest by middle school teachers. The obtained results are not surprising if we consider the fact that primary teaching is the first level of compulsory education. For many parents, this is the first experience of working with a school/teacher with whom they come in direct contact almost every day. Most often, they are very aware of the responsibilities that both parents and teachers have to support student academic performance both at the moment and in the future, so they strive to provide appropriate support to teachers so that their children have better grades. On the other hand, infant and preschool education is not compulsory and parents feel less responsibility, especially when it comes to the academic performance of their children. In turn, the support that preschool teachers expect in this regard is often lacking. Furthermore, the lowest support by parents was reported in subject teaching and can be expected, because of the large number of subject teachers with whom parents are mostly not in contact, the smaller number of lessons in certain school subjects, and the shorter duration of certain school subjects within the entire educational process (max. 1 to 2 years). It should be added that only recently has the higher education system in Croatia recognized parents as its stakeholders with whom preschool, primary, and middle school teachers communicate almost daily while lacking the necessary competencies, which justifiably causes work stress. Moreover, teachers are expected to build partnerships or at least quality collaborative relationships with their students'

families and, at the same time, the vast majority of professionals' lack competencies in this area (Dotger & Benett, 2010; Ljubetić, Maglica & Grčić, 2021; Ljubetić, Reić Ercegovac & Koludrović, 2016). This result is supported by a study by Hiatt-Michael (2010: 40) who states that young teachers in particular point out that “... *communication with parents is their biggest challenge as teachers*”. Hargreaves (2001) points out that the lack of teacher competencies for collaboration with families is recognizable in their distress, anxiety, worry and fear, even after they graduate and engage in the labour market independently.

Institution administration was assessed more positively by primary school teachers in relation to preschool teachers, with no significant difference between the two groups of teachers. The obtained results are also not surprising if we compare the system of infant and preschool education and the primary school system. Namely, the former is not compulsory, founders of preschool institutions are often private persons who make their own rules, they sometimes make unrealistic demands on preschool teachers, and very often put the imperative of a larger number of enrolled children before the quality of the educational process and the interests of children and preschool teachers. This is extremely unmotivating and frustrating for preschool teachers, in comparison with teachers in the primary school system. In addition, the administration (the principal) of infant and preschool education institutions in the Croatian system is often physically distant, i.e. separated from preschool teachers, with whom they rarely have direct contact, so it is possible that preschool teachers assess administration as a smaller source of support, in comparison with primary school teachers who daily communicate with the administration, which is generally available to them to address day-to-day challenges.

The remaining two work environment variables with a significant main effect on the group of participants – time pressure and security – were also assessed lower by preschool teachers compared to class and subject teachers, which is partly surprising. The question arises as to the possible reasons for such results. Lack of time to perform all tasks and jobs, knowing the educational system in Croatia, could be expected to be a source of stress for subject teachers who objectively have very limited time to perform their tasks in working with students and parents, yet the results suggest otherwise. It is possible that preschool teachers, aware of the need for quality work with children and parents, really do experience time pressure due to the large number of children in groups, often including children with disabilities. Moreover, as very often there is one preschool teacher per group, especially when parents come to preschool, the teachers may feel dissatisfied and pressured because they do not have time for the necessary conversations with parents to achieve better communication while understanding the importance of such relationships. This aspect of the work environment, as well as the security that is assessed lower by preschool teachers, should be examined in future research to find out the causes of such assessments by preschool teachers and primary school teachers.

Finally, the research tried to determine which of the social and work environment factors significantly contribute to the explanation of differences in the work engagement of preschool teachers and primary school teachers, thus hierarchical regressions were conducted with components of work engagement as criteria. Although all predictors together explained a relatively modest part of the variance of work engagement (from 13% for absorption to 25% for vigour), which suggests a conclusion about other important determinants of work engagement (personality characteristics, other characteristics, and job demands), some predictors in the last step of the analysis proved relevant for all three or at for least two criterion variables of work engagement. Thus, security proved to be important for vigour, dedication, and absorption, and time pressure and students for vigour and dedication. In other words, participants who assess low time pressure, i.e. who believe that they have enough time for quality work and assess work with children/students as a source of support and satisfaction, show a higher level of vigour and dedication to work. The obtained results can be considered as expected and understandable. When the basic need for security in the work environment is met, when an individual does not feel time pressure to perform work tasks, when s/he has satisfactory relationships with children/students, and is competent to respond to the challenges they pose, s/he can focus and perform the work tasks with more dedication and engagement.

Concerning the sociodemographic predictors, it should be noted that gender proved to be a significant predictor of dedication and absorption, with male teachers showing a lower level of engagement than female teachers. Previous research has shown that female teachers, compared to male teachers, are more prone to higher emotional exhaustion (Sari, 2004; Slišković, Burić & Knežević, 2016), which can be a result of excessive dedication to work or work absorption. However, in these interpretations, it should be noted that it is not possible to conclude gender differences in the work engagement of preschool and primary school teachers due to the large gender disparity in this research.

Length of working experience, on the other hand, proved to be a significant predictor of vigour and absorption, where participants with longer experience reported a higher level of both components of engagement. Earlier studies, although on different samples, also suggested a significant positive contribution of age to vigour and dedication and contribution of age to engagement (Kim & Kang, 2016). Longer working experience most likely contributes to higher assessments, precisely because of the experience in facing and coping with (new) challenges of everyday pedagogical practice. Furthermore, some authors suggest that with age and years of service, individuals develop different strategies of emotional regulation and strengthen their professional identity, which has a positive effect on work engagement (Kim & Kang, 2016).

*Limitations of the study.* Before the conclusion, several limitations of the conducted research should be pointed out. One refers to the significantly larger

number of female preschool and primary school teachers compared to male teachers, although in the population of preschool and primary school teachers in Croatia there is a large gender disparity in favour of women. Yet, due to the small proportion of male participants, it is not possible to conclude gender differences in the perception of sources of stress/support as well as work engagement. Furthermore, the research was conducted in an online environment during the Covid-19 pandemic, which impaired the representativeness of the sample, and it is possible that living in uncertain and threatening circumstances affected the research results. It is also possible that data related to job security was significantly influenced by the circumstances in which the research was conducted. Although all measures had satisfactory reliability values, it should be noted that the two measures had kurtosis parameters slightly above the limits allowed for the application of parametric procedures.

## ■ CONCLUSION

The interest of scientists in researching the work engagement of educational workers in recent decades has not diminished, which is justified given the complexity and increase in work tasks, the multi-layered nature of work environments, and thus their possible impacts. They can be either possible sources of stress or support for practitioners, making it necessary to research them and use the obtained results to improve pedagogical practice as well as the curriculum of the education of future preschool and primary school teachers. This research aimed to investigate which factors contribute to the work engagement of Croatian teachers and in what way. The obtained results point to the conclusion that, compared to middle school teachers, preschool teachers and primary school teachers, are more dedicated to and absorbed by their work. Furthermore, preschool teachers, compared to others, rated lower most work-related and social factors (time pressure, security, administration, and children/students). Parents were assessed as the most positive source of support by class teachers, followed by preschool teachers, and then by middle school teachers. When it comes to predictors of work engagement, the results suggest that with years of service, vigour and absorption grow, while dedication depends on the type of job and proves to be higher at lower levels of the educational system. Among social and work environment factors, work engagement depends on security, time pressure, and children/students and parents as potential sources of work support. It is possible to conclude that these dimensions should be respected and included in the modernization of the curriculum of formal education of preschool teachers and primary school teachers as well as in programs for their lifelong learning. Finally, it is worth noting that administration, colleagues, and professional development have not proved relevant for the work engagement of preschool and primary school teachers.

## References

- Addimando, L. (2019). The effect of positive working conditions on work engagement and teaching classroom practices: A large cross-sectional study in Switzerland. *Frontiers in Psychology, 10*, 21–29. DOI:10.3389/fpsyg.2019.02129
- Badri, M., A., Alnuaimi, J., Mohaidat, G. Yang & Al Rashedi A. (2016). Perception of teachers' professional development needs, impacts, and barriers: The Abu Dhabi case. *SAGE Open, 6*(3), 1–15. DOI:10.1177/2158244016662901
- Bakker, A. B., Schaufeli, W. B., Leiter, M. & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress, 22*(3), 187–200. DOI: 10.1080/02678370802393649
- Dotger, B. H. & Benett, J. (2010). Educating teachers and school leaders for school–family partnership. In D. B. Hiatt-Michel (Ed.), *Promising Practices to Support Family Involvement in School* (pp. 129–149). Information Age Publishing, Inc.
- Duggan, E. (1997). Teacher stress research: A review of the literature. *Journal of Psychologists and Counsellors in Schools, 7*, 125–136. DOI: 10.1017/S103729110000131X
- Ferguson, K., C. Mang & Frost, L. (2017). Teacher stress and social support usage. *Brock Education Journal, 26*(2), 62–86. DOI: 10.26522/brocked.v26i2.606
- Forcella, L., Di Donato, A., Reversi, S., Fattorini, E. & Boscolo, P. (2009). Occupational stress, job insecurity and perception of the health status in Italian teachers with stable or temporary employment. *Journal of Biological Regulators and Homeostatic Agents, 23*(2), 85–93. PMID: 19589289
- Hakannen, J. J., Bakker, A. B. & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495–513. DOI: 10.1016/j.jsp.2005.11.001
- Hargreaves, A. (2001). Emotional geographies of teaching. *Teachers College Record: The Voice of Scholarship in Education, 103*(6), 1056–1080. DOI:10.1111/0161-4681.00142
- Harmsen, R., Helms–Lorenz, M., Maulana, R. & van Veen, K. (2018). The relationship between beginning teachers' stress causes, stress responses, teaching behaviour and attrition. *Teachers and Teaching, 24*(6), 626–643. DOI: 10.1080/13540602.2018.1465404
- Herman, K., Hickmon–Rosa, J. & Reinke, W. M. (2017). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behaviour Interventions, 20*(2), 90–100. DOI:10.1177/1098300717732066
- Hiatt-Michael, D. B. (2010). Family involvement policy, research and practice. In D. B. Hiatt-Michel (Ed.), *Promising Practices to Support Family Involvement in School* (pp. 1–8). Information Age Publishing, Inc.
- Hutell, D. & Gustavsson, P. J. (2011). Factors affecting burnout and work engagement in teachers when entering employment. *Work, 40*(1), 85–98. DOI:10.3233/WOR-2011-1209
- Jeon, L., Buettner, C. K., Grant, A. A. & Lang S. N. (2019). Early childhood teachers' stress and children's social, emotional, and behavioural functioning. *Journal of Applied Developmental Psychology, 61*, 21–32. DOI: 10.1016/j.appdev.2018.02.002
- Jukić, T. (2019). Creativity in education. *Proceedings of Seventh International Science Conference: Contemporary Education – Conditions, Challenges and Perspectives* (pp. 11–16). South West University Neofit Rilski.
- Kim, N. & Kang, S.W. (2016). Older and more engaged: The mediating role of age-linked resources on work engagement. *Human Resource Management, 56*(5), 731–746. DOI: 10.1002/hrm.21802

- 📖 Koludrović, M., Jukić, T. & Reić Ercegovac, I. (2009). Sagorijevanje na poslu kod učitelja razredne i predmetne nastave te srednjoškolskih nastavnika [Burnout at classroom teacher, subject teachers and high school teachers]. *Život i škola, LV(22)*, 235–249.
- 📖 Kokkinos, C.M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology 77(1)*, 229–243. DOI:10.1348/000709905X90344
- 📖 Ljubetić, M., Maglica, T. & Grčić, A. (2021). Sources and components of occupational stress from the teachers' perspective. In J. Tekavac & A. Lipovec (Eds.), *Perspectives on Teacher Education and Development* (p. 50). Maribor: Faculty of Education, University of Maribor.
- 📖 Ljubetić, M., Reić Ercegovac, I. & Koludrović, M. (2016). Quality partnership as a contextual prerequisite of successful learning of young and preschool-aged children. *Journal of Education and Learning, 5(1)*, 78–87. DOI:10.5539/jel.v5n1p78
- 📖 Maas, J., Schoch, S., Scholz, U., Rackow, P., Schüler, J., Wegner, M. & Keller, R. (2021). Teachers' perceived time pressure, emotional exhaustion and the role of social support from the school principal. *Social Psychology of Education, 24(2)*, 441–464. DOI:10.1007/s11218-020-09605-8
- 📖 Minghui, L., Lei, H., Xiaomeng, C. & Potmešilc, M. (2018). Teacher efficacy, work engagement, and social support among chinese special education school teachers. *Frontiers in Psychology, 9*, 648. DOI: 10.3389/fpsyg.2018.00648
- 📖 Ramberg, J., Brodin Låftman, S., Åkerstedt, T. & Modin, B. (2020). Teacher stress and students' school well-being: The Case of upper secondary schools in Stockholm. *Scandinavian Journal of Educational Research, 64(6)*, 816–830. DOI: 10.1080/00313831.2019.1623308
- 📖 Reinke, W. M., Herman, K. C. & Stormont, M. (2013). Classroom level positive behavior supports in schools implementing SW-PBIS identifying areas for enhancement. *Journal of Positive Behavior Interventions, 15(1)*, 39–50. DOI:10.1177/1098300712459079
- 📖 Salmela-Aro K, L., Hietajärvi L. & Lonka, K. (2019). Work burnout and engagement profiles among teachers. *Frontiers in Psychology 10*:2254. DOI.org/10.3389/fpsyg.2019.02254
- 📖 Sandilos, L. E. & Di Perna, J. (2022). Initial development and validation of the measure of stressors and supports for teachers (MOST). Assessment for Effective Intervention (online first). DOI:10.1177%2F15345084211061338
- 📖 Sandilos, L. E., Goble, P., Rimm-Kaufman, S. E. & Pianta, R.C. (2018). Does professional development reduce the influence of teacher stress on teacher-child interactions in pre-kindergarten classrooms? *Early Childhood Research Quarterly, 42(1)*, 280–290. DOI: 10.1016/j.jecresq.2017.10.009
- 📖 Sari, H. (2004). An analysis of burnout and job satisfaction among Turkish special school headteachers and teachers, and the factors affecting their burnout and job satisfaction. *Educational Studies, 30(3)*, 291–306. DOI:/10.1080/0305569042000224233
- 📖 Schaufeli, W. B. & Bakker, A. B. (2004). Job demands, job resources and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25(3)*, 293–315. DOI:10.1002/job.248
- 📖 Schaufeli, W. B., Bakker, A. B. & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. *Educational and Psychological Measurement, 66(4)*, 701–716. DOI:10.1177/0013164405282471
- 📖 Skaalvik, E. M. & Skaalvik, K. (2016). Teacher stress and teacher self-efficacy as predictors of engagement, emotional exhaustion, and motivation to leave the teaching profession. *Creative Education, 7(13)*, 1785–1799. DOI:10.4236/ce.2016.713182
- 📖 Slišković, A., Burić, I. & Knežević, I. (2016). Zadovoljstvo poslom i sagorijevanje na poslu kod učitelja: važnost podrške ravnatelja i radne motivacije [Job Satisfaction and Burnout in Teacher: The importance

of Perceived Support from Principial and Work Motivation]. *Društvena istraživanja* 25(3), 371–392. DOI: 10.5559/di.25.3.05

- 📖 Timms, C. & Brough, P. (2013). I like being a teacher – Career satisfaction, the work environment and work engagement. *Journal of Educational Administration*. 51(6), 768–789. DOI:10.1108/JEA-06-2012-0072.
- 📖 Toropova, A., Myrberg, E. & Johansson, S. (2021). Teacher job satisfaction: The importance of school working conditions and teacher characteristics. *Educational Review*, 73(1), 71–97. DOI:10.1080/00131911.2019.1705247
- 📖 Vidić, T. (2009). Zadovoljstvo poslom učitelja u osnovnoj školi [Primary school teachers' job satisfaction]. *Napredak*, 150(1), 7–20. Retrieved 25.7.2021 from the World Wide Web [http://hrcak.srce.hr/index.php?show=clanak&id\\_clanak\\_jezik=123228](http://hrcak.srce.hr/index.php?show=clanak&id_clanak_jezik=123228)

Recieved 27.01.2022; Accepted for publishing 09.06.2022.