



Individual-psychological factors and perception of social support in burnout syndrome

Individualno-psihološki faktori i percepcija socijalne podrške kod sindroma izgaranja

Vesna R. Jovanović*, Darko Hinić†‡, Tamara Džamonja Ignjatović§,
Branka Stamatović Gajić¶***, Tomislav Gajić¶***, Goran Mihajlović††††

*Academy of Applied Studies, Department of Applied Health Studies, Belgrade, Serbia; University of Kragujevac, †Faculty of Science, ‡Faculty of Philology and Arts, ††Faculty of Medical Sciences, Kragujevac, Serbia; University of Belgrade, §Faculty of Philosophy, ¶Faculty of Political Science, Belgrade, Serbia; ¶University Singidunum, Faculty of Health and Business Studies, Valjevo, Serbia; **Institute for International Health and Education, Albany, NY, USA; ††Clinical Center Kragujevac, Psychiatry Clinic, Kragujevac, Serbia

Abstract

Background/Aim. Burnout syndrome is a psychological phenomenon that occurs as a response to chronic interpersonal stressors at work. It is manifested by emotional exhaustion, depersonalization and a sense of reduced personal accomplishment. The aim of the study was to examine the correlation between burnout syndrome, individual-psychological factors and social support among special and regular education teachers, as well as to determine differences of burnout syndrome dimensions between groups of teachers with different educational backgrounds. **Methods.** This non-experimental, cross-sectional correlation study included 317 teachers (122 special education teachers and 38 other teachers in special education for children with intellectual disabilities and 157 teachers from regular primary schools) from Belgrade. Maslach Burnout Inventory (MBI), Assertiveness Assessment Questionnaire Scale (A-Scale), Rosenberg Self-Esteem Scale (RSS), Teacher Self-Efficacy Scale (TSES), and Multidimensional Perceived Social Support Scale (MSPSS) were used in the study. **Results.** The highest prevalence of high levels of burnout were recorded on the emotional exhaustion subscale and were 38% for special education teachers, 47% for other teachers in special

education, and 39% for teachers in regular education. The most important predictors of burnout in special education teachers were: for emotional exhaustion (self-esteem, efficiency of class management and seniority); for depersonalization (self-esteem, efficiency of class management and social support); for a sense of lower personal accomplishment (assertiveness, effective student learning and class management). The most important predictors of burnout in regular education teachers were: for emotional exhaustion (assertiveness, effective class management, social support and seniority); for depersonalization (self-esteem, effective student learning and seniority); for a reduced personal accomplishment (self-esteem, effective student learning and social support). **Conclusion.** Individual-psychological factors have emerged as an important predictor of burnout syndrome in the teaching profession, indicating the importance of examining the impact of these factors in other professions that are characterized by the specific demands for a deeper emotional investment during the work process.

Key words:

burnout, psychological; education; education, special; educational personnel; psychology; schools; students; social support; surveys and questionnaires.

Apstrakt

Uvod/Cilj. Sindrom izgaranja je psihološki fenomen koji nastaje kao odgovor na hronične izvore stresa na radnom mestu. Ovaj sindrom se manifestuje emocionalnom iscrpljenosti, depersonalizacijom i osećajem smanjenog ličnog postignuća. Cilj rada bio je da se ispita povezanost sindroma izgaranja na poslu sa individualno-psihološkim faktorima i socijalnom podrškom kod nastavnika specijal-

nog i redovnog obrazovanja, kao i da se utvrdi razlika u stepenu izraženosti dimenzija sindroma izgaranja na poslu između grupa nastavnika različitog obrazovnog profila. **Metode.** U ovoj neekperimentalnoj, korelacionoj studiji preseka učestvovalo je 317 nastavnika (122 defektologa-nastavnika i 38 nastavnika drugih usmerenja u specijalnim školama za intelektualno ometenu decu i 157 nastavnika iz redovnih osnovnih škola) iz Beograda. U istraživanju su korišćeni: Maslač upitnik sindroma izgaranja (MBI), Upitnik

za procenu assertivnosti (A-skala), Rozenbergova skala samopoštovanja (RSS), Skala samoefikasnosti nastavnika (TSES) i Multidimenzionalna skala opažene socijalne podrške (MSPSS). **Rezultati.** Najveća zastupljenost visokih nivoa izgaranja na poslu zabeležena je na području emocionalne iscrpljenosti i iznosila je 38% kod defektologa, 47% kod nedefektologa u specijalnim školama i 39% kod nastavnika u redovnom obrazovanju. Najznačajniji prediktori sindroma izgaranja defektologa bili su: za emocionalnu iscrpljenost (samopoštovanje, efikasnost upravljanja odeljenjem i radni staž); za depersonalizaciju (samopoštovanje, efikasnost upravljanja odeljenjem i socijalna podrška); za osećaj smanjenog postignuća (assertivnost, efikasno učenje učenika i upravljanje odeljenjem). Najvažniji prediktori izgaranja na poslu nastavnika redovnog obrazovanja bili su: za emocion-

alnu iscrpljenost (assertivnost, efikasno upravljanje odeljenjem, socijalna podrška i radni staž); za depersonalizaciju (samopoštovanje, efikasno učenje učenika i radni staž); za osećaj smanjenog postignuća (samopoštovanje, efikasno učenje učenika i socijalna podrška). **Zaključak.** Individualno-psihološki faktori su se izdvojili kao bitan prediktor sindroma izgaranja na poslu u profesiji nastavnika, što ukazuje na značaj ispitivanja uticaja ovih faktora i u drugim profesijama koje se odlikuju specifičnim zahtevima za dubljim emotivnim angažovanjem tokom radnog procesa.

Ključne reči:

sagorevanje na radu, sindrom; obrazovanje; obrazovanje, specijalno; osoblje, obrazovno; psihologija; škole; studenti; socijalna podrška; ankete i upitnici.

Introduction

Burnout syndrome at work is manifested by emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment¹. It occurs in response to workplace related long-term emotional and interpersonal stressors². In the eleventh edition of the International Classification of Diseases, burnout syndrome was included in the "Employment or Unemployment Problems" (QD85) section³, and defined thoroughly. This means that the World Health Organization is also considering the risk of burnout syndrome in the workplace in general.

Studies dealing with mental health research indicate the increasing prevalence of burnout syndrome among teachers, at all levels of education⁴. Teachers in their everyday work are focused on the various communication relationships and on problem solving, both of which often lead to increased sense of responsibility, emotional effort and stress. This condition, if lasting long enough, can cause latent or manifest disorders, especially anxiety, but also the development of burnout syndrome^{5, 6}. The most common sources of stress in the teaching profession arise from: coping with learning difficulties and behavior of students; conflicts with colleagues; lack of administrative support; problematic relationships with parents; short deadlines and unfulfilled expectations^{4, 6}.

Intercultural studies on the prevalence of burnout syndrome in teachers show diverse results. The general conclusion is that teachers experience higher levels of stress than the general population, and that special education teachers (SET) are at particular risk^{6, 7}. Studies of burnout syndrome among regular education teachers (RET) indicate that primary school teachers have higher burnout than high school teachers⁸. There are also some differences with regard to the type of student's special education needs, so a study in Iran found that those teaching students with autism exhibit significantly higher levels of burnout than teachers of children with intellectual disabilities and hearing impairment⁹. Other study highlights the negative consequences of working with children with emotional disturbance⁶. We could search for a possible explanation for all these findings in the differences that exist in the work positions of teachers and in the social position of the profession⁷.

The changes in educational reform that have taken place with the introduction of inclusive education in our country in 2009 led to changes in the educational approach and in setting priorities. This has increased the demands on teachers and their approach to teaching, and can have a stressful effect on both RET and SET. The developmental advancement of children in need is very slow, so SET may feel less successful and have lower sense of personal accomplishment¹⁰. This may also occur with RET, given that educational reforms in the Republic of Serbia are addressing deinstitutionalization and inclusion of an increasing number of children with developmental disabilities in regular classrooms¹¹.

The most significant predictors of burnout syndrome are thought to be personality factors, followed by interpersonal relationships, communication skills and social support¹²⁻¹⁴. Some studies indicate that lower self-esteem is associated with greater susceptibility to burnout syndrome in teachers¹⁵. It has also been confirmed that teachers who have high levels of self-efficacy successfully resist the challenges they face during the work process (problems related to students behavior, learning, communication with parents, etc.), and they do not perceive them as stressful, unlike teachers with low levels of self-efficacy^{16, 17}. Various sources of social support may also be closely correlated with burnout syndrome, since the support of loved ones in stressful situations can significantly reduce psychological stress, anxiety and burnout^{18, 19}.

The importance of individual-psychological factors such as assertiveness, self-esteem and self-efficacy in burnout syndrome can also be understood through the construct of resilience, that is, resistance to stress. Resilience is defined as the ability of an individual to return to its original level of functioning after the action of a stressor or to resist stressor negative impact²⁰. Resilience, as a complex construct, is significantly influenced by external factors as well as internal factors, such as self-esteem and self-efficacy^{21, 22}. Also, individuals who develop mental, physical and social resources which contribute to their resilience and direct them towards assertive behavior in decision-making, are better prepared to deal with stressors in their working environment^{23, 24}. Assertiveness, self-esteem and self-efficacy develop throughout life, through learning, experience and interaction with others, so it is very important to focus on factors that we

can influence in order to prevent burnout and promote positive mental health of employees.

Research into the impact of individual-psychological and environmental factors on the emergence and development of teacher burnout syndrome in our country is scarce. In regard to this, the first aim of the study was to examine the association between burnout syndrome and individual-psychological characteristics: assertiveness, self-esteem, self-efficacy, and perceived social support. The second aim was to examine the potential differences in the severity of burnout syndrome dimensions between special education teachers working with intellectually disabled children and teachers working in regular education.

Methods

This cross-sectional correlation study was conducted from May to July 2018 at the territory of Belgrade Municipality. The study was conducted after obtaining the approval of the Ethics Committee of the Faculty of Medical Sciences in Kragujevac and written consent of the principals and participants of all schools included in the study. Each participant was informed of the basic purpose of the research and signed consent to participate in the research.

Participants

The study group consists of teachers working with children with intellectual disabilities in eight special elementary schools (special education teachers and other teachers in special education, i.e. teachers trained in other fields), and teachers who teach in four regular elementary schools. The selection of regular schools that were included in the study was conducted on the basis of their territorial proximity to the special primary schools included in the survey.

The respondents included in the study were special education teachers in special education (SET group) or other teachers in special education (OTSE group) or regular education teachers (RET group), aged 25 to 60 years with at least one year of professional experience. Teachers with less than one year of professional experience were not selected, in order to avoid the impact of workplace adjustment stress during the first year of employment.

Of the 388 surveyed, only the participants who fully responded to the given battery of instruments ($n = 317$) entered the final sample. The group of teachers in special education included 122 SET and 38 OTSE participants, while 157 participants were in regular education group. Groups of SET and RET were dominated by women (91% and 84.1%, respectively), while in the group of OTSE this percentage was lower (60%).

There were no differences in age [$F(2) = 0.096, p = 0.909$] between the groups, and the average age of the subjects was 41.56 ± 8.92 . The average length of service was 14.04 ± 8.87 years, with no differences between the groups [$F(2) = 2.602, p = 0.076$]. Regarding the level of education, certain differences were obtained [$\chi^2(2) = 10.678, p = 0.005$], primarily because there are almost no special education teachers who have completed only higher education or vocational studies, while in groups of OTSE and RET, this percentage was around 10%.

There is no difference between groups in work status [$\chi^2(2) = 1.317, p = 0.251$], because only about a quarter of respondents in each group work part-time. Also, there was no difference in marital status [$\chi^2(3) = 3.216, p = 0.392$].

Instruments

Assertiveness was assessed with the Assertiveness Assessment Scale Questionnaire – A Scale²⁵. The scale consists of items describing reactions and behaviors typical of (non)assertiveness. The subject was instructed to use a five-point Likert-type scale (ranging from the constant absence of reactions or behavior to their constant presence), to evaluate their potential reactions in social situations requiring assertiveness. Of the 27 items in the A scale, 13 are positive (assertive), while 14 are negative. The score range is from 27 to 135 points, with a higher score indicating a greater assertiveness²⁵. The internal reliability of the scale in our study was high ($\alpha = 0.92$).

Self-esteem is expressed through the score on the Rosenberg Self-Esteem Scale (RSS)²⁶. It is a one-dimensional scale that measures a person's global self-esteem or general value orientation toward themselves. The scale contains 10 statements, five in the positive and five in the negative direction, and the respondents answer them on a scale from 0 – "I strongly disagree", to 3 – "I strongly agree". The range of scores is from 0 to 30 where a higher score means a higher degree of self-esteem. The reliability of the scale in our sample was good ($\alpha = 0.81$).

Teacher self-efficacy has been operationalized through the Teacher Self-Efficacy Scale (TSES)²⁷. The TSES is designed to identify the difficulties that teachers most commonly encounter in their daily school activities. The scale contains of 12 questions grouped into three subscales: efficacy in instructional strategies, efficacy in classroom management, and efficacy in student engagement. The task of the respondents was to express their degree of agreement with the statement on a five-point Likert scale (from 1 – "not at all", to 5 – "at large"). A higher score indicates greater efficacy. The internal consistency of the scale, in our study was high ($\alpha = 0.91$).

Social support is expressed through the Multidimensional Scale of Perceived Social Support (MSPSS)²⁸, Serbian version of the scale²⁹. This instrument provides a subjective assessment of the support a respondent perceives receiving from family, friends and other important persons. The questionnaire contains 12 items, and the responses range from a complete disagreement with a statement (1), through neutral position (4), to a complete agreement with a statement (7). Only the total score was used in the interpretation of the results, the maximum value of which is 84 and indicates the highest degree of perceived social support²⁹. The internal reliability of the scale in our study was high ($\alpha = 0.93$).

Finally, burnout syndrome is expressed through scores on the Maslach Burnout Inventory – Human Service Survey or MBI-HSS¹, its Serbian version³⁰. The scale measures the frequency and intensity of work-related burnout in people working in the human services or helping professions. The questionnaire consists of 22 statements, which are quantified on a scale from 0 – "never", 3 – "several times during the month", to 6 – "every day", and contains three subscales that measure: the feeling of

emotional exhaustion (EE) – experience of overexertion and exhaustion of emotional/physical resources; depersonalization (DP) – a negative, overly indifferent reaction to various aspects of work and the experience of alienation from other people in the workplace; a sense of reduced personal accomplishment (PA) – declining sense of competence and successful achievement in working with people. High scores on the emotional exhaustion and depersonalization subscales contribute to burnout syndrome, while high scores on the personal achievement subscale reduce it^{1,30}. The total score range is 0–132. The internal consistency of the scale was good ($\alpha = 0.79$).

Statistical analysis

The sample size was determined by the current number of full-time teachers employed in elementary schools for intellectually disabled children in Belgrade¹¹. The distribution of categories for alpha error 0.05, beta error 0.10, and study strength of 90% for two-way testing were calculated. Kolmogorov-Smirnov and Shapiro-Wilk tests were used to test for normal distribution. Arithmetic mean, median, standard deviation, Mann-Whitney-Wilcoxon test, and χ^2 test were used in the analysis. The meth-

ods of parametric correlation and regression, as well as non-parametric correlation depending on the distribution, were used in the analysis of the correlation. In all the methods used, the significance level was 0.05. The IBM SPSS Version 21 software package was used.

Results

The results on the work-related emotional exhaustion subscale, in the SET and RET groups showed slightly lower scores than the average theoretical values (Table 1). In contrast, depersonalization scores deviated significantly toward lower values. Finally, on the scale of reduced personal accomplishment, the scores in these two groups deviated significantly toward higher values. In the OTSE group, scores on all dimensions did not deviate significantly from the average.

Distribution of the respondents according to the levels of burnout (Table 2) shows that for emotional exhaustion just over one third of the respondents in the SET and RET groups fell into the high burnout category, while in the OTSE group the number of those respondents was almost 50%. In depersonalization, most subjects were in the low burnout category,

Table 1

Descriptive data for the burnout scale in all groups

Parameter	Group	n	Mean ± SD	Min-Max	Skewness	Kurtosis	p
Emotional exhaustion	SET	122	22.60 ± 13.997	1–54	0.313	-0.925	0.064*
	RET	157	22.99 ± 12.197	0–54	0.278	-0.619	0.067*
	OTSE	38	25.50 ± 10.321	0–44	-0.320	-0.224	0.730†
Depersonalisation	SET	122	5.03 ± 5.236	0–24	10.321	10.370	0.000*
	RET	157	5.73 ± 4.985	0–21	10.056	0.648	0.000*
	OTSE	38	5.87 ± 5.126	0–21	0.934	0.657	0.057*
Personal accomplishment	SET	122	38.18 ± 7.355	18–48	-0.645	-0.210	0.015*
	RET	157	38.20 ± 6.779	16–48	-0.956	0.855	0.000*
	OTSE	38	34.34 ± 10.055	10–48	-0.556	-0.354	0.051*

*Kolmogorov-Smirnov test; †Shapiro-Wilk test.

SET – Special education teachers; RET – Regular education teachers; OTSE – Other teachers in special education; SD – standard deviation.

Table 2

Percentual distribution of burnout categories

Parameter	SET	RET	OTSE
Emotional exhaustion			
low (0–16)	37.7	18.4	35.6
moderate (17–26)	24.6	34.2	25.6
high (27+)	37.7	47.4	38.8
Depersonalisation			
low (0–6)	73.0	57.9	65.6
moderate (7–12)	15.6	28.9	23.8
high (13+)	11.5	13.2	10.6
Personal accomplishment			
low (0–31)	Skewn ess.9	42.1	13.1
moderate (32–38)	27.0	18.4	29.4
high (39+)	54.1	39.5	57.5

For abbreviations see under Table 1.

although this percentage was slightly higher in the SET group. In terms of personal accomplishment, just over half of the respondents in the SET and RET groups fell into the category of the high accomplishment, while the percentage in the OTSE group was around 40%.

There were no differences in scores on burnout dimensions between SET and RET groups. Although the results for the OTSE group have to be taken with caution due to the small number of subjects, when comparing the results in this group with other two groups, it can be seen that it stands out with higher scores on the dimension of emotional exhaustion [$F(2,314) = 1.775, p = 0.048$] and lower scores on the personal accomplishment dimension [$F(2,314) = 4.454, p = 0.012$], although both differences are low.

Individual-psychological factors

As for the demographic variables, women were found to be slightly more emotionally exhausted ($t(277) = 2.164, p < 0.05$). Similar was shown for those who were divorced [$F(3,275) = 5.869, p < 0.001$]. With the increase in age ($r = 0.294, p < 0.001$), and especially the length of service ($r = 0.359, p < 0.001$), emotional exhaustion increases, while

with the increase of seniority, the depersonalization increases ($r = 0.202, p < 0.001$). Finally, the more emotionally drained the subjects were ($r = 0.547, p < 0.001$), with a higher sense of depersonalization ($r = 0.415, p < 0.001$) and low accomplishment ($r = 0.422, p < 0.001$), the more they think about changing jobs.

Regarding determination, the relationship between the intensity of burnout syndrome and these psychological factors, Table 3 presents descriptive data for all three scales for assessment of assertiveness, self-esteem and self-efficacy.

There was no difference between the three groups of respondents at the assertiveness [$F(2,314) = 2.620, p = 0.074$], and self-esteem scale [$F(2,314) = 1.439, p = 0.239$]. There is a difference when it comes to assessing teacher's efficacy: efficacy for learning strategies [$F(2,314) = 8.762, p < 0.001$], and classroom management efficacy [$F(2,314) = 8.330, p < 0.001$], while for student engagement efficacy, this difference is at the border of significance [$F(2,314) = 2.846, p = 0.060$]. All these differences were found to be the result of lower scores in the OTSE group compared to the other two groups (Table 4).

Due to the fact that there were some differences be-

Table 3

Descriptive data for assertiveness, self-esteem and self-efficacy

Parameter	Mean ± SD	Min–Max	Skewness	Kurtosis	p*
Assertiveness					
SET	97.88 ± 14.332	58–127	-0.101	-0.449	0.129
RET	94.64 ± 14.470	49–130	-0.307	0.326	0.074
OTSE	94.37 ± 13.179	75–126	0.514	-0.493	0.132
Self-esteem					
SET	23.75 ± 4.568	12–30	-0.686	-0.110	0.000
RET	23.93 ± 3.852	9–30	-0.644	0.742	0.000
OTSE	22.58 ± 4.104	15–29	-0.280	-0.958	0.072
Efficacy in instructional strategies					
SET	17.94 ± 2.001	12–20	-0.687	-0.366	0.000
RET	17.65 ± 2.038	11–20	-10.10	10.01	0.000
OTSE	16.29 ± 2.799	12–20	-0.111	-10.279	0.005
Efficacy in classroom management					
SET	16.34 ± 2.781	9–20	-0.494	-0.344	0.000
RET	16.29 ± 2.569	9–20	-0.491	-0.343	0.000
OTSE	14.37 ± 3.258	8–20	-0.051	-0.735	0.181
Efficacy in student engagement					
SET	15.40 ± 2.917	7–20	-0.309	-0.135	0.018
RET	15.74 ± 2.816	9–20	-0.366	-0.653	0.000
OTSE	14.45 ± 2.947	10–20	0.531	-0.797	0.013

*Kolmogorov-Smirnov test.

For abbreviations see under Table 1.

Table 4

Differences between groups in assertiveness, self-esteem and self-efficacy scores

Group	Efficacy in instructional strategies	Efficacy in classroom management	Efficacy in student engagement
OTSE	16.29	14.37	14.45
RET	17.62	16.27	15.68
SET	17.94	16.34	15.40

tween the groups, the correlations with burnout syndrome were evaluated for each group separately (Table 5).

A moderate to high positive correlation was found in the SET and RET groups between sense of personal accomplishment and all psychological variables. The negative correlation was found between the other two aspects of burnout syndrome and the mentioned variables. Similar data were obtained in the group of OTSE, only with lower coefficients.

Social support

As shown in the Table 6 (the relationship between the intensity of burnout syndrome and the perceived social support), the scores deviate towards higher values in all three groups, as respondents estimate that they receive relatively high levels of social support from their social environment.

No significant differences in scores were obtained on the social support scale between the groups [$F(2.314) = 0.172, p > 0.05$], so the correlation between the aspects of burnout syndrome and social support was analyzed for the whole sample. Spearman's correlation coefficient ranged from moderately positive in personal accomplishment ($r = 0.440, p < 0.001$), to moderately negative in depersonaliza-

tion ($r = -0.473, p < 0.001$), and highly negative in emotional exhaustion ($r = -0.573, p < 0.001$).

Prediction of burnout syndrome

In the last part of the statistical analyses, a regression analysis was performed. For the SET and RET groups, those variables which showed at least moderate correlations with the burnout dimensions, and without high inter-correlation, were included in the predictive models. The model for a group of OTSE was not tested due to small number of subjects, the number of outliers, and quite low correlations³¹.

In the group of SET, several variables which significantly predicted the variance of the criterion variable stood out. The model is significant [$F(3.118) = 36.132, p < 0.001$] and explains as much as 48% of variance (Adjusted R Square is 46.6%). Table 7 shows the values for the predictor variables that were found to be significant.

Emotional exhaustion in the RET group was significantly predicted by the model shown in Table 8 [$F(4.152) = 31.129, p < 0.001$]. This model predicts 45% of variance (Adjusted R Square is 43.6%). In Table 8, the values for the predictor variables that were found to be significant were given.

Table 5
Correlations of assertiveness, self-esteem and self-efficacy scores with
MBI-HSS Scores (by groups)

Groups	EE	DP	PA
SET			
assertiveness	-0.513**	-0.443**	0.501**
self-esteem	-0.613**	-0.635**	0.430**
efficacy in instructional strategies	-0.322**	-0.484**	0.485**
efficacy in classroom management	-0.509**	-0.479**	0.450**
efficacy in student engagement	-0.475**	-0.317**	0.336**
RET			
assertiveness	-0.461**	-0.337**	0.375**
self-esteem	-0.438**	-0.413**	0.487**
efficacy in instructional strategies	-0.187*	-0.320**	0.417**
efficacy in classroom management	-0.445**	-0.385**	0.493**
efficacy in student engagement	-0.437**	-0.429**	0.506**
OTSE			
assertiveness	-0.248	-0.426**	0.432**
self-esteem	-0.077	-0.550**	0.533**
efficacy in instructional strategies	-0.044	-0.421**	0.535**
efficacy in classroom management	0.304	-0.287	0.342*
efficacy in student engagement	-0.503**	-0.364*	-0.460**

* $p < 0.05$; ** $p < 0.01$.

EE – emotional exhaustion; DP – depersonalization; PA – personal accomplishment; MBI-HSS – Maslach Burnout Inventory-Human Service Survey.

For other abbreviations see under Table 1.

Table 6
Descriptive data for the Social support scale

Group	n	Mean \pm SD	Min–Max	Skewn.	Kurtosis	p*
SET	122	73.97 \pm 12.408	29–84	-1.729	2.748	0.000
RET	157	74.71 \pm 8.941	36–84	-1.665	3.628	0.000
OTSE	38	73.68 \pm 9.112	51–84	-0.722	-0.317	0.007

*Kolmogorov-Smirnov test.

For abbreviations see under Table 1.

In the SET group, depersonalization is predicted by the model shown in Table 9 [$F(3,118) = 37.811, p < 0.001$], with 48.3% of the variance (Adjusted R Square is 47%).

Depersonalization in the group of RET is significantly predicted by the model shown in Table 10 [$F(3,153) =$

18.581, $p < 0.001$]. This model predicts 26.7% of the variance (Adjusted R Square stands at 25.3%).

Finally, personal accomplishment in the SET group is significantly predicted by the model shown in Table 11 [$F(3,118) = 21.348, p < 0.001$], with 35.2% of the variance

Table 7**Model of emotional exhaustion (dependent variable) in the special education teacher (SET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	78.197	6.679		11.708	0.000
Self-esteem	-1.364	0.230	-0.445	-5.937	0.000
Efficacy in classroom management	-1.665	0.369	-0.331	-4.514	0.000
Seniority	0.267	0.118	0.155	2.260	0.026

Table 8**Model of emotional exhaustion (dependent variable) in the regular education teacher (RET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	71.860	7.411		9.697	0.000
Seniority	0.464	0.078	0.365	5.966	0.000
Assertiveness	-0.235	0.059	-0.270	-3.994	0.000
Efficacy in classroom management	-0.954	0.340	-0.202	-2.807	0.006
Social support	-0.238	0.093	-0.175	-2.567	0.011

Table 9**Depersonalisation (dependent variable) model in the special education teacher (SET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	29.635	2.515		11.785	0.000
Self-esteem	-0.465	0.104	-0.406	-4.459	0.000
Efficacy in classroom management	-0.453	0.138	-0.241	-3.280	0.001
Social support	-0.083	0.038	-0.197	-2.197	0.030

Table 10**Depersonalisation (dependent variable) model in the regular education teacher (RET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	20.355	2.694		7.556	0.000
Efficacy in student engagement	-0.512	0.138	-0.288	-3.698	0.000
Self-esteem	-0.324	0.103	-0.248	-3.157	0.002
Seniority	0.080	0.037	0.154	2.144	0.034

Table 11**Model of personal accomplishment (dependent variable) in the special education teacher (SET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	-1.285	5.187		-0.248	0.805
Assertiveness	0.147	0.046	0.287	3.195	0.002
Efficacy in student engagement	0.961	0.327	0.262	2.936	0.004
Efficacy in classroom management	0.478	0.239	0.181	2.001	0.048

Table 12**Model of personal accomplishment (dependent variable) in the regular education teacher (RET) group**

Model	Unstandardized coefficients		Standardized coefficients	<i>t</i>	<i>p</i>
	B	Standard error	Beta		
(Constant)	5.142	3.996		1.287	0.200
Efficacy in student engagement	0.778	0.180	0.322	4.331	0.000
Self-esteem	0.495	0.134	0.279	3.705	0.000
Social support	0.121	0.055	0.161	2.217	0.028

(Adjusted R Square is 33.5%).

In the RET group, dimension of personal accomplishment is significantly predicted by the model in Table 12 [$F(3,153) = 28,867, p < 0.001$], with 36.1% of the explained variance (Adjusted R Square was 35%).

Discussion

The highest levels of burnout were observed on the emotional exhaustion dimension. They range from almost half in the OTSE group to around one third in the other two groups. This finding is in line with research conducted in similar studies³².

If we compare all three groups, we see that OTSE working in special schools, in comparison to others, exhibit slightly higher levels of burnout symptoms like emotional exhaustion and reduced personal accomplishment. Some studies support this finding, indicating that the type of education, or qualification for work, affect burnout syndrome^{6, 33}. Lack of teacher training for work with children needing intensive development support can lead to maladaptation to the work process, which affects adversely both the teacher and the student³³. The teacher may develop negative attitudes towards the student or the process itself, due to misunderstandings of problems, unrealistic expectations or time constraints, which can further lead to emotional exhaustion³⁴. In schools for children with developmental disabilities in Serbia, in addition to special education teachers, classes can be delivered by teachers of other educational profiles, who have appropriate professional qualifications for the subjects they teach, but are not specially educated for working with children with disabilities. In this context, we can assume that their psychological and academic preparation for special education work was shorter, and that emotional investment and expectations in working with these children may be less adaptable.

This view is supported by the further results of our study, where we find that there is a difference when it comes to assessing teachers' self-efficacy. The OTSE group assessed their efficacy for learning strategies, classroom management, and student engagement lower compared the other two groups. Education specializing in working with children with disabilities provides special education teachers with a set of competencies for the effective choice of learning strategies, classroom management, and teaching of this type of students, unlike education in other college settings, where the focus of study is more on the study of specific subjects in the

domain of typical child development. When these teachers work in regular education, the lack of the competencies is not visible to a greater extent, but in special education this obviously becomes a problem, perceived by the teachers themselves.

The main aim of our study was an attempt to identify a set of predictors of burnout syndrome from demographic, psychological factors, and social support variables. Numerous studies have examined the link between psychological factors, social support and burnout syndrome^{12, 13, 35, 36}, but a very limited number of studies have focused on simultaneous examination of the predictive values of these factors, with teachers working in different types of education. As expected, in all three groups of teachers, a negative correlation of all psychological factors with emotional exhaustion, de-personalization and reduced personal realization was confirmed. Prediction models have additionally focused our attention on individual factors.

The most significant predictors of emotional exhaustion of special education teachers were the self-esteem and efficacy of classroom management, and to some extent the work experience. It is already known that these factors are positively correlated with each other, or that positive belief about one's own efficacy increase one's sense of self-worth³⁷. Other studies have confirmed the correlation between self-efficacy and burnout syndrome, too^{6, 35, 36}. Self-esteem enhances teacher resilience, enabling them to manage critical events and stressful situations they are often exposed to, while working with children with special needs⁴. Considering that emotional exhaustion, as the first stage of burnout syndrome, actually arises in response to stress, work problems and unfulfilled expectations³⁸, we can assume that special education teachers who have a sense of self-confidence, self-esteem and work-related efficacy more easily protect themselves from exhaustion.

In the group of regular education teachers, assertiveness as well as social support emerged as the most important predictors of emotional exhaustion, in addition to work experience and effective classroom management. For regular education teachers, the ability to communicate adequately and assertively is a basic tool for working with students, given that communication is the basis of good interpersonal relationships and of effective management for each group of people. In order for the teacher to direct and control the class functioning, it is necessary for them to have a developed skill of clear and effective communication. Assertiveness involves establishing clear rules and boundaries with respect to others, and its im-

portance in achievement of good interactions with students and parents is undeniable. Assertiveness enhances adaptability to stress and helps a person to cope with obstacles, while protecting them from emotional exhaustion¹³. Social support is an important resource that helps teachers deal with the emotional demands of teaching and has a significant impact on teacher engagement. Family and friends are very important because an individual relies on them for social, emotional and material support, and this is an important sociocultural aspect traditionally rooted in the people who live in these territories.

In the group of special education teachers, social support stood out as a significant predictor of depersonalization, in addition to self-esteem and effective classroom management, which were protective factors in emotional exhaustion too. Considering that depersonalization is the second stage of the burnout syndrome, related to the interpersonal dimension, characterized by a cynical attitude and experience of alienation from people at work³⁹, we can assume that effective classroom management and self-esteem are no longer sufficient at this stage, additional support and external gratification are thus necessary. Because depersonalization is rooted in the realm of interpersonal relationships, it seems likely that teachers who have more satisfying interpersonal relationships will also exhibit lower depersonalization. In addition to family and friends support, in the context of burnout prevention, the perception of social support from supervisors and colleagues is also important. Administrative support and team efficacy have previously shown strong connection with special education teachers' job satisfaction⁴⁰.

Important protective factors for depersonalization in regular education teachers are efficacy in student engagement, self-esteem and seniority. Depersonalization is one of the ways in which, through reduced engagement with others, employees try to reduce the emotional burden or feeling of dissatisfaction at work, so the connection to efficacy and self-esteem is also expected here. People with high levels of self-efficacy believe in their abilities, they approach demanding tasks as challenges to overcome, not as threats to be avoided²².

Assertiveness, effective student engagement, and classroom management stood out as predictors of personal accomplishment in the special education teachers group. The reduced accomplishment is also reflected in the negative evaluation of personal competences and productivity, and in the experience of diminished self-efficacy⁴¹. The experience of effective teaching and classroom management produce enhanced sense of personal accomplishment. Assertiveness plays a significant role in the social integration of children with developmental disabilities, since difficulties in performing various activities often condition them to develop passive or aggressive behavior⁴².

The factors that enhance achievement in the RET group are efficacy of student engagement, self-esteem and social support. Effective teaching is the key to every teacher's success. Unlike special education teachers, regular education teachers are more likely to seek external confirmation of student performance through grades, competitions, discipline, so in this case the environmental recognition and social support can influence the development of personal realization.

Finally, we should not forget that work experience stood out as a significant predictor of emotional exhaustion and de-personalization. Although the opposite is often confirmed⁶, our findings are in line with some national and international research^{43, 44}. Older teachers in Serbia have experienced numerous changes in their field in recent years. Those changes require new knowledge and skills, and such experience can lead to the accumulation of long-lasting demands and the high degree of difficulty in dealing with new demands, all of which can act as stressors for the teaching profession.

Limitation of the study

This study has several limitations. It is a cross-sectional study that included respondents only from Belgrade. Future research could also include practical indicators of burnout syndrome (absenteeism, fluctuation, presence of psychophysical symptoms). Further research could also point to potential differences in teacher burnout syndrome in relation to the number of students in the class, the age of the students, the number of students taught according to an individual educational program, etc.

Conclusion

This study indicates the need for a deeper understanding of the individual-psychological and environmental factors that may influence strategies to overcome burnout syndrome. Teachers who exhibit lower levels of self-esteem and self-efficacy, who are less assertive, are more likely to develop burnout syndrome at work. The social support of family and friends is also an important predictor of burnout, especially regarding emotional exhaustion. As assertiveness, self-esteem, and self-efficacy are acquired, developed, refined, and changed throughout one's life, it would be important to strengthen employees' psychological mechanisms through organized and continuous interventions aimed at enhancing personal resources and reducing the sense of stress in working with students. This would also be important for human resource management in general, given that every organization's goal is to increase productivity and efficiency of its employees with a high degree of personal satisfaction.

R E F E R E N C E S

1. *Maslach C, Jackson S E, Leiter MP.* Maslach burnout inventory: manual. Palo Alto, CA: Consulting Psychologists Press; 1996.
2. *Dedić G.* Professional burnout. Vojnosanit Pregl 2005; 62(11): 851–5. (Serbian)
3. *WHO.* Classification of Diseases. 11th Revision (ICD-11). Genève: World Health Organization; 2019. Available from: <https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2fid%2fentity%2f129180281>

4. De Stasio S, Fiorilli C, Benevene P, Uusitalo-Malmivaara L, Chiacchio CD. Burnout in special needs teachers at kindergarten and primary school: investigating the role of personal resources and work wellbeing. *Psychol Schools* 2017; 54(5): 472–86.
5. Vojvodić RA, Dedić G, Đukić Dejanović S. Defense mechanisms and quality of life in military personnel with a burnout syndrome. *Vojnosanit Pregl* 2019; 76(3): 298–306.
6. Brunsting NC, Sreckovic MA, Lane KL. Special education teacher burnout: A synthesis of research from 1979 to 2013. *Educ Treat Children* 2014; 37(4): 681–711.
7. Platsidou M, Agaliotis I. Burnout, job satisfaction and instructional assignment-related sources of stress in Greek special education teachers. *Int J Disabil Dev Ed* 2008; 55(1): 61–76.
8. Tatar M, Horenzyk G. Diversity-related among teachers. *Teach Teach Educ* 2003; 19: 397–408.
9. Zarafshan H, Mohammadi MR, Ahmadi F, Arsalani A. Job burnout among Iranian elementary school teachers of students with autism: a comparative study. *Iran J Psychiatry* 2013; 8(1): 20–7.
10. Küçüksüleymanoğlu R. Burnout syndrome levels of teachers in special education schools in Turkey. *Int J Spec Educ* 2011; 26(1): 53–63.
11. Ministry of Education, Science and Technological Development. Analysis of the Quality of Education in Schools and Departments for Education of Children with Disabilities. Belgrade, 2015. Available from: <http://defektologizirbije.org/wp-content/uploads/2016/05/UNICEF.pdf> (Serbian)
12. Jovanović RV, Krajnović D, Mibajlović G, Marinković V. Factors associated with the burnout syndrome among professionals in pharmaceutical manufacturing industry and marketing. *Racionalna terapija* 2017; 9(2): 13–22.
13. Jovanović V, Karić J, Mihajlović G, Džamonja-Ignjatović T, Hinić D. Work-related burnout syndrome in special education teachers working with children with developmental disorders – Possible correlations with some socio-demographic aspects and assertiveness. *Eur J Spec Needs Educ* 2019; 34(5): 692–701.
14. Bradley JR, Cartwright S. Social support, job stress, health and job satisfaction among nurses in the United Kingdom. *Int J Stress Manag* 2002; 9(3): 163–82.
15. Tunde AO, Oladipo OC. Influence of personality and self-esteem on teachers. Proneness to burnout syndrome in Lagos metropolis. *Am J Appl Psychol* 2013; 1(1): 7–13.
16. Smetackova I. Self-efficacy and burnout syndrome among teachers. *Eur J Soc Behav Sci* 2017; 20: 2476–88.
17. Padillaa AAG, Boniventob CVE, Suarezb BSP. Burnout syndrome and self-efficacy beliefs in professors. *Propós Represent* 2017; 5(2): 65–126.
18. Bataineh O, Alsagheer A. An investigation of social support and burnout among special education teachers in the United Arab Emirates. *Int J Spec Educ* 2012; 27(2): 5–13.
19. Kim B, Jee S, Lee J, An S, Lee SM. Relationships between social support and student burnout: A meta-analytic approach. *Stress Health* 2018; 34(1): 127–34.
20. Abtar S. The psychology of kindness, Belgrade: Clio; 2017.
21. Yilmaz EB. Resilience as a strategy for struggling against challenges related to the nursing profession. *Chin Nurs Res* 2017; 4: 9–13.
22. Martínez-Martí ML, Ruch W. Character strengths predict resilience over and above positive affect, self-efficacy, optimism, social support, self-esteem, and life satisfaction. *J Posit Psychol* 2017; 12(2): 110–9.
23. Zwack J, Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians. *Acad Med* 2013; 88(3): 382–9.
24. de Sousa JC, Pinto FR, de Lacerda Leite JC, de Pádua Araújo A, da Silva PMM, de Castro ABC. Relation between burnout syndrome and resilience in higher teaching activity. *Mediterr J Soc Sci* 2018; 9(5): 177–86.
25. Torilović S, Okanović P, Krstić T. Assertiveness Assessment. In: Biro M, Smederevac S, Novorić Z, editors. Evaluation of Psychological and Psychopathological Phenomena Belgrade: Serbian Psychological Society; 2009. p. 63–72. (Serbian)
26. Rosenberg M. Society and the adolescent self-image. Princeton: Princeton University Press; 1965.
27. Tschannen-Moran M, Woolfolk HA. Teacher efficacy: Capturing and elusive construct. *Teach Teach Educ* 2001; 17(7): 783–805.
28. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multidimensional scale of perceived social support. *J Pers Assess* 1988; 52(1): 30–41.
29. Janković S, Ražnatorić M, Marinković J, Maksimović N, Janković J, Dikanović B. Relevance of psychosomatic factors in psoriasis: A case-control study. *Acta Derm Venereol* 2009; 89(4): 364–8.
30. Milenović M. Study of burnout syndrome in anesthesiologists, working in the tertiary level medical health institutions in Belgrade [dissertation]. Belgrade: Faculty of Medicine, University of Belgrade; 2015 (Serbian)
31. Tabachnick BG, Fidell LS. Using multivariate statistics. 5th ed. Boston: Pearson Education, 2007.
32. Lau PSY, Yuen M, Chan RMC. Do demographic characteristics make a difference to burnout among Hong Kong secondary school teachers? *Soc Indic Res* 2005; 71(1–3): 491–516.
33. Boujut E, Dean A, Grouselle A, Cappe E. Comparative study of teachers in regular schools and teachers in specialized schools in France, working with students with an autism spectrum disorder: Stress, social support, coping strategies and burnout. *J Autism Dev Disord* 2016; 46(9): 2874–89.
34. Monsen JJ, Ewing DL, Kwoka M. Teachers' attitudes towards inclusion, perceived adequacy of support and classroom learning environment. *Learn Environ Res* 2014; 17(1): 113–26.
35. Molero Jurado MDM, Pérez-Fuentes MDC, Atria L, Oropesa Ruiz NF, Gázquez Linares JJ. Burnout, Perceived Efficacy, and Job Satisfaction: Perception of the Educational Context in High School Teachers. *Biomed Res Int* 2019; 2019: 1021408.
36. Malinen OP, Savolainen H. The effect of perceived school climate and teacher efficacy in behavior management on job satisfaction and burnout: A longitudinal study. *Teach Teach Educ* 2016; 60: 144–152.
37. Molero MDM, Pérez-Fuentes MDC, Gázquez JJ. Analysis of the Mediating Role of Self-Efficacy and Self-Esteem on the Effect of Workload on Burnout's Influence on Nurses' Plans to Work Longer. *Front Psychol* 2018; 9: 2605.
38. Maslach C, Schaufeli WB. Historical and conceptual development of burnout. In: Schaufeli WB, Maslach C, Marek T, editors. Professional burnout: Recent developments in theory and research. Washington, DC: Taylor & Francis; 1993. p. 1–16.
39. Hultell D, Gustavsson P. Factors affecting burnout and work engagement in teachers when entering employment. *Work* 2011; 40(1): 85–98.
40. Conley S, You S. Key influences on special education teachers' intentions to leave: The effects of administrative support and teacher team efficacy in a mediational model. *Educ Manag Admin Leader* 2017; 45(3): 521–40.
41. Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annu Rev Psychol* 2001; 52: 397–422.

42. Moffet A, Alexander M, Dummer G. Teaching social skills and assertiveness to students with disabilities. *Teach Element Physical Educ* 2006; 17(6): 43–7.
43. Stanetić K, Tešanović G. Influence of age and length of service on the level of stress and burnout syndrome. *Med Pregl* 2013; 66(3–4): 153–62.
44. Kożak A, Kersten M, Iler Z, Nienhaus A. Psychosocial work-related predictors and consequences of personal burnout among staff working with people with intellectual disabilities. *Res Dev Disabil* 2013; 34(1): 102–15.

Received on August 20, 2019
Accepted January 14, 2020
Online First January, 2020