ACCEPTED MANUSCRIPT

Accepted manuscripts are the articles in press that have been peer reviewed and accepted for publication by the Editorial Board of the Vojnosanitetski Pregled. They have not yet been copy edited and/or formatted in the publication house style, and the text could still be changed before final publication.

Although accepted manuscripts do not yet have all bibliographic details available, they can already be cited using the year of online publication and the DOI, as follows: article title, the author(s), publication (year), the DOI.

Please cite this article INDIVIDUAL-PSYCHOLOGICAL FACTORS AND PERCEPTION OF SOCIAL SUPPORT IN BURNOUT SYNDROME

INDIVIDUALNO-PSIHOLOŠKI FAKTORI I PERCEPCIJA SOCIJALNE PODRŠKE KOD SINDROMA IZGARANJA

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

Vojnosanitetski pregled (2019); Online First January, 2020.

UDC:
DOI: https://doi.org/10.2298/VSP190820004J

When the final article is assigned to volumes/issues of the Journal, the Article in Press version will be removed and the final version appear in the associated published volumes/issues of the Journal. The date the article was made available online first will be carried over.
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, Serbia,
‡University of Kragujevac, Faculty of Philology and Arts, Serbia,
§University of Belgrade, Faculty of Philosophy, Serbia,
‖University of Belgrade, Faculty of Political Science, 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,
††University of Kragujevac, Faculty of Medical Sciences, Serbia

Correspondence to: Vesna R. Jovanović, Academy of Applied Studies, Department of Applied Health Studies, Belgrade, Serbia, Cara Dušana 254, 11080 Zemun, Tel. 064/35-38-357, e-mail: vesnajovanovic07@gmail.com
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 is 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 (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 are: 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.

Keywords: burnout syndrome; special education schools; regular schools; teachers; psychological factors; social support.
**Apstrakt**

**Uvod / Cilj.** Sindrom izgaranja je psihološki fenomen koji nastaje kao odgovor na hronične interpersonalne stresore na radu. Manifestuje se emocionalnom iscrpljenošću, depersonalizacijom i osećajem smanjenog ličnog postignuća. Cilj rada je ispitivanje povezanosti sindroma izgaranja sa individualno-psihološkim faktorima i socijalnom podrškom kod nastavnika specijalnog i redovnog obrazovanja, kao i utvrđivanje razlika u stepenu izraženosti dimenzija sindroma izgaranja između grupa nastavnika različitog obrazovnog profila. **Metode.** U ovoj neeksperimentalnoj, 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) na teritoriji Beograda. U istraživanju su korišćeni: Maslač upitnik sindroma izgaranja (MBI), Upitnik za procenu asertivnosti (A-skala), Rozenbergova skala samopoštovanja (RSS), Skala nastavničke samoefikasnosti (TSES) i Multidimenzionalna skala opažene socijalne podrške (MSPSS). **Rezultati.** Najveća zastupljenost visokih nivoa izgaranja zabeležena je na supskali emocionalne iscrpljenosti i iznosi 38% kod defektologa, 47% kod nedefektologa u specijalnim školama i 39% kod nastavnika u redovnom obrazovanju. Najznačajniji prediktori sindroma izgaranja defektologa su: za emocionalnu iscrpljenost (samopoštovanje, efikasnost upravljanja odeljenjem i radni staž); za depersonalizaciju (samopoštovanje, efikasnost upravljanja odeljenjem i socijalna podrška); za osećaj smanjenog postignuća (asertivnost, efikasno učenje učenika i upravljanje odeljenjem). Najvažniji prediktori izgaranja nastavnika redovnog obrazovanja su: za emocionalnu iscrpljenost (asertivnost, 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 u nastavničkoj profesiji, što ukazuje na značaj ispitivanja uticaja ovih faktora i u drugim profesijama koje se odlikuju specifičnim zahtevima za dubljin emotivnim investiranjem tokom radnog procesa. **Ključne reči:** sindrom izgaranja; specijalne škole; redovne škole; nastavnici; psihološki faktori; socijalna podrška.
Introduction

Burnout syndrome at work is manifested by emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment \(^1\). It occurs in response to workplace related long-term emotional and interpersonal stressors \(^2\). In the eleventh edition of the *International Classification of Diseases*, burnout syndrome was included in the "Employment or Unemployment Problems" (QD85) section \(^3\), 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 education \(^4\). 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 teachers \(^8\). 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 impairment \(^9\). Other study highlights the negative consequences of working with children with emotional disturbance \(^6\). 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 profession \(^7\).

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 regular education teachers and special
education teachers. The developmental advancement of children in need is very slow, so special education teachers may feel less successful and have lower sense of personal accomplishment. This may also occur with regular education teachers, 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 classrooms.

The most significant predictors of burnout syndrome are thought to be personality factors, followed by interpersonal relationships, communication skills and social support. Some studies indicate that lower self-esteem is associated with greater susceptibility to burnout syndrome in teachers. 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 student behavior, learning, communication with parents, etc), and they do not perceive them as stressful, unlike teachers with low levels of self-efficacy. 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.

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 a stressor or to resist stressor negative impact. Resilience, as a complex construct, is significantly influenced by external as well as internal factors, such as self-esteem and self-efficacy. 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. 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 objective of our study was to examine the association between burnout syndrome and individual-psychological characteristics: assertiveness, self-esteem,
self-efficacy, and perceived social support. The second objective 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 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 sample 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 sample was conducted on the basis of their territorial proximity to the special primary schools included in the survey.

The criteria for inclusion in the study were that the respondents were: special education teachers in special education (SET group) or other teachers in special education (OTSE group) or regular education teachers (RET group); 25 to 60 years of age, with at least one year of professional experience. Teachers with less than one year of professional experience have not been 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 participants (OTSE), while 157 participants were in regular education group. Groups of SET and RET are dominated by women (91% and 84.1%), while in the group of OTSE this percentage is lower (60%).

There were no differences in age (F (2) = 0.096, p = .909) between the groups, and the average age of the subjects was 41.56 ± 8.922. The average length of service was 14.04 ± 8.872 years, with no differences between the groups (F (2) = 2.602, p = .076). Regarding the level of education, certain differences were obtained ($\chi^2$ (2) = 10.678, p = .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 is around 10%. There is no difference between groups in work status ($\chi^2(2) = 1.317, p = .251$), because only about a quarter of respondents in each group work part-time, and there is no difference in marital status also ($\chi^2(3) = 3.216, p = .392$).

**Instruments**

Assertiveness is assessed with the Assertiveness Assessment Scale - A Scale $^{25}$. The scale consists of items describing reactions and behaviors typical of (non)assertiveness. The subject is 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 assertiveness $^{25}$. 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 is 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 scale $^{29}$. 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 support 29. 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-HSS 1, its Serbian version 30. 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 Belgrade 11. 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 chi-square test were used in the analysis. The methods 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 groups of special education teachers (SET) and regular education teachers (RET) show slightly lower
scores than the average theoretical values (Table 1). In contrast, depersonalization scores deviate significantly toward lower values. Finally, on the scale of reduced personal accomplishment, the scores in these two groups deviate significantly toward higher values. In the group of other teachers in special education (OTSE), scores on all dimensions do not deviate significantly from the average.

If we look at the distribution of the respondents according to the levels of burnout (Table 2), we will see that for emotional exhaustion just over one third of the respondents in the SET and RET groups fall into the high burnout category, while in the OTSE group the number of those respondents is almost 50%. In depersonalization, most subjects are in the low burnout category, although this percentage is slightly higher in SET. In terms of personal accomplishment, just over half of the respondents in the SET and RET groups fall into the category of the high accomplishment, while the percentage in the OTSE group is around 40%.

Table 1

| Descriptive Data for the Burnout Scale in all Groups |
|-----------------------------------------------|
| group | N | Mean | Std. Dev. | Min/Max | kurtosis | z   |
|-------|---|------|------------|---------|-----------|-----|
| Emotional Exhaustion | SET | 22 | 2.60 | 13.997 | 1/54 | .313 | -.925 | .064 |
| | RET | 57 | 2.99 | 12.197 | 0/54 | .278 | -.619 | .067 |
| | OTSE | 38 | 5.50 | 10.321 | 0/44 | -.320 | -.224 | †.730 |
| Depersonalisation | SET | 22 | 5.03 | 5.236 | 0/24 | 1.321 | 1.370 | .000** |
| | RET | 57 | 5.73 | 4.985 | 0/21 | 1.056 | .648 | .000** |
| | OTSE | 38 | 8.87 | 5.126 | 0/21 | .934 | .657 | .057 |
| Personal Accomplishment | SET | 22 | 8.18 | 7.355 | 18/48 | -.645 | -.210 | .015* |
| | RET | 57 | 8.20 | 6.779 | 16/48 | -.956 | .855 | .000** |
| | OTSE | 38 | 4.34 | 10.055 | 10/48 | -.556 | -.354 | .051 |

*p<.05, **p<.01, z– Kolmogorov-Smirnov, † Shapiro-Wilk, SET - Special education teachers, RET - Regular education teachers, OTSE - Other teachers in special education
Table 2

Percentual Distribution of Burnout Categories

|               | SET | RET | OTSE |
|---------------|-----|-----|------|
| Emotional Exhaustion low (0-16) | 7.7 | 8.4 | 35.6 |
| moderate (17-26) | 4.6 | 4.4 | 25.6 |
| high (27+)     | 7.7 | 7.4 | 38.8 |
| Depersonalisation low (0-6)       | 3.0 | 7.9 | 65.6 |
| moderate (7-12) | 5.6 | 8.9 | 23.8 |
| high (13+)     | 1.5 | 3.2 | 10.6 |
| Personal Accomplishment low (0-31) | 8.9 | 12.1 | 13.1 |
| moderate (32-38) | 7.0 | 8.4 | 29.4 |
| high (39+)     | 4.1 | 9.5 | 57.5 |

There are 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, we can see that it stands out with higher scores on the dimension of emotional exhaustion ($F(2,314) = 1.775, p = .048$) and lower scores on the personal accomplishment dimension ($F(2,314) = 4.454, p = .012$), although both differences are low.

**Individual-psychological factors**

As for the demographic variables, women were found to be slightly more emotionally exhausted ($t(277) = 2.164, p < .05$). Similar is shown for those who were divorced ($F(3,275) = 5.869, p < .001$). With the increase in age ($r = .294, p < .001$), and especially the length of service ($r = .359, p < .001$), emotional exhaustion increases, while with the increase of seniority increases the depersonalization ($r = .202, p < .001$). Finally, the more emotionally drained the subjects are ($r = .547, p < .001$), with a higher sense of depersonalization ($r = .415, p < .001$) and low accomplishment ($r = .422, p < .001$), the more they think about changing jobs.
The next aim of the study was to determine the relationship between the intensity of burnout syndrome and psychological factors: assertiveness, self-esteem, and self-efficacy. Table 3 presents descriptive data for all three scales.

### Table 3

|                          | group | Mean | Std. Dev. | Min/Max | Skewn. | Kurtosis | z       |
|--------------------------|-------|------|-----------|---------|--------|----------|---------|
| Assertiveness SET        | 97.88 | 14.33 | 58/127    | -.101   | -.449  | .129     |         |
|                          | RET   | 44.64| 14.47     | 49/130  | -.307  | .326     | .074    |
|                          | OTSE  | 43.79| 13.179    | 75/126  | .514   | -.493    | .132    |
| Self-esteem SET          | 3.75  | 4.568| 12/30     | -.686   | -.110  | .000**   |         |
|                          | RET   | 3.93 | 3.852     | 9/30    | -.644  | .742     | .000**  |
|                          | OTSE  | 2.58 | 4.104     | 15/29   | -.280  | -.958    | .072    |
| Efficacy in Instructional Strategies SET | 7.94 | 2.001| 12/20     | -.687   | -.366  | .000**   |         |
|                          | RET   | 7.65 | 2.038     | 11/20   | -1.10  | 1.01     | .000**  |
|                          | OTSE  | 6.29 | 2.799     | 12/20   | -.111  | 1.279    | .005**  |
| Efficacy in Classroom Management SET | 6.34 | 2.781| 9/20      | -.494   | -.344  | .000**   |         |
|                          | RET   | 6.29 | 2.569     | 9/20    | -.491  | -.343    | .000**  |
|                          | OTSE  | 4.37 | 3.258     | 8/20    | -0.51  | -.735    | .181    |
| Efficacy in Student Engagement SET | 15.40| 2.917| 7/20      | -.309   | -.135  | .018*    |         |
|                          | RET   | 15.74| 2.816     | 9/20    | -.366  | -.653    | .000**  |
|                          | OTSE  | 14.45| 2.947     | 10/20   | .531   | -.797    | .013*   |

*p<.05, **p<.01. z – Kolmogorov-Smirnov, Shapiro-Wilk

Scores on the Assertiveness Scale do not deviate from the normal distribution, while in self-esteem there is a deviation towards higher values in the first two groups of respondents. In the efficacy subscale, values in all three groups have significantly higher values, except for classroom management in the group of OTSE.
There was no difference between the three groups of respondents at the assertiveness (F (2,314) = 2.620, p = .074), and self-esteem scale (F (2,314) = 1.439, p = .239). There is a difference when it comes to assessing teacher’s efficacy: efficacy for learning strategies (F (2,314) = 8.762, p < .001), and classroom management efficacy (F (2,314) = 8.330, p < .001), while for student engagement efficacy, this difference is at the border of significance (F (2,314) = 2.846, p = .060). All these differences were found to be the result of lower scores in the group of OTSE compared to the other two groups (Table 4).

### Table 4

**Differences Between Groups in Assertiveness, Self-esteem and Self-efficacy**

|                     | Efficacy in Instructional Strategies | Efficacy in Classroom Management | Efficacy in Student Engagement |
|---------------------|-------------------------------------|---------------------------------|------------------------------|
| 1                   | 2                                   | 1                               | 2                            |
| OTSE                | 16.29                               | 14.37                           | 14.45                        |
| RET                 | 17.62                               | 16.27                           | 15.68                        |
| SET                 | 17.94                               | 16.34                           | 15.40                        |

Due to the fact that there were some differences between the groups, the correlations with burnout syndrome were evaluated for each group separately (Table 5).

### Table 5

**Correlations of Assertiveness, Self-esteem and Self-efficacy Scores with MBI-HSS**

|                     | EE   | DP   | PA   |
|---------------------|------|------|------|
| **group SET**       |      |      |      |
| Assertiveness       | .513* | .443* | 501* |
| Self-esteem         | .613* | .635* | 430* |
| Efficacy in Instructional Strategies | .322* | .484* | 485* |
| Efficacy in Classroom Management | .509* | .479* | 450* |
| Efficacy in Student Engagement | .475* | .317* | 336* |

|                     | EE   | DP   | PA   |
|---------------------|------|------|------|
| **group RET**       |      |      |      |
| Assertiveness       | .461* | .337* | 375* |
| Self-esteem         | .438* | .413* | 487* |
Efficacy in Instructional Strategies \( .187^{*} .320^{**} 417^{**} \)

Efficacy in Classroom Management \( .445^{**} .385^{**} 493^{**} \)

Efficacy in Student Engagement \( .437^{**} .429^{**} 506^{**} \)

| group | OTSE | EE | DP | PA |
|-------|------|----|----|----|
| Assertiveness | \(-.248 .426^{**} 432^{**} \) | \(-.077 .550^{**} 533^{**} \) | \(-.044 .421^{**} 535^{**} \) | \(.304 -.287 .342^{*} \)
| Efficacy in Instructional Strategies | \(-.503^{**} -.364^{*} .460^{**} \) | \(-.248 .426^{**} 432^{**} \) | \(-.077 .550^{**} 533^{**} \) | \(-.044 .421^{**} 535^{**} \) | \(.304 -.287 .342^{*} \)
| Efficacy in Student Engagement | \(z^{*} .437^{**} .506^{**} \) |

*\(p<.05\), \(**p<.01\), EE – Emotional Exhaustion, DP – depersonalization, PA – personal accomplishment

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 and the mentioned variables. Similar data were obtained in the group of OTSE only with lower coefficients.

**Social support**

The next goal of the research was to determine the relationship between the intensity of burnout syndrome and the perceived social support. Table 6 shows the descriptive data for all groups.

**Table 6**

| Group   | N   | Mean | Std. Dev. | Min/Max | Skewness | Kurtosis | Z    |
|---------|-----|------|-----------|---------|----------|----------|------|
| Social Support | SET 22 | 3.97 | 12.408 | 29/84 | 1.729 | 2.748 | 0.00** |
|          | RET 57 | 4.71 | 8.941 | 36/84 | 1.665 | 3.628 | 0.00** |
|          | OTSE38 | 3.68 | 9.112 | 51/84 | -.722 | -.317 | .07** |

**\(\text{**p<.01, z} = \text{Kolmogorov-Smirnov, Shapiro-Wilk}\)

As shown in the Table 6, 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 \( (F (2,314) = .172, p > .05) \), so the correlation between the aspects of burnout and social support was analyzed for the whole sample. Spearman's correlation coefficient ranged from moderately positive in personal accomplishment \( (r = .440, p < .001) \), to moderately negative in depersonalization \( (r = -.473, p < .001) \), and highly negative in emotional exhaustion \( (r = -.573, p < .001) \).

**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 \(^{31}\), and quite low correlations.

In the group of SET, several variables which significantly predicted the variance of the criterion variable stood out. The model is significant \( (F (3,118) = 36.132, p < .001) \) and explains as much as 48 percent of variance (Adjusted R Square is 46.6%). Table 7 shows the values for the predictor variables that are found to be significant.

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|-----|
| (Constant) | 8.197 | 6.679 | 1.708 | .000 |
| Self-esteem | 1.364 | .230 | -.445 | 5.937 | .000 |
| Efficacy in Classroom Management | 1.665 | .369 | -.331 | 4.514 | .000 |
| Seniority | .267 | .118 | .155 | 2.260 | .026 |

a. Dependent Variable: Emotional Exhaustion

Emotional exhaustion, in the RET group, is significantly predicted by the model shown in Table 8 \( (F (4,152) = 31.129, p < .001) \). 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 are given.
**Table 8**

| Model | Unstandardized Coefficients | Standardized Coefficients | t  | Sig. |
|-------|-----------------------------|---------------------------|----|------|
| (Constant) | 71.860 | 7.411 | 9.697 | 0.000 |
| Seniority | .464 | .078 | .365 | 5.966 | 0.000 |
| Assertiveness | -.235 | .059 | -.270 | -3.994 | 0.000 |
| Efficacy in Classroom Management | -.954 | .340 | -.202 | -2.807 | 0.006 |
| Social Support | -.238 | .093 | -.175 | -2.567 | 0.011 |

a. Dependent Variable: Emotional Exhaustion

In the SET group, depersonalization is predicted by the model shown in Table 9 (F (3,118) = 37.811, p < .001), with 48.3% of the variance (Adjusted R Square is 47%).

**Table 9**

| Model | Unstandardized Coefficients | Standardized Coefficients | t  | Sig. |
|-------|-----------------------------|---------------------------|----|------|
| (Constant) | 29.635 | 2.515 | 1.785 | 0.000 |
| Self-esteem | -.465 | .104 | -.406 | 4.459 | 0.000 |
| Efficacy in Classroom Management | -.453 | .138 | -.241 | 3.280 | 0.001 |
Depersonalization, in the group of RET, is significantly predicted by the model shown in Table 10 (F (3,153) = 18.581, p < .001). This model predicts 26.7% of the variance (Adjusted R Square stands at 25.3%).

| Model                  | Unstandardized Coefficients | Standardized Coefficients | t  | Sig. |
|------------------------|-----------------------------|---------------------------|----|------|
| (Constant)             | 20.355                      |                           | 7.556 | .000 |
| Efficacy in Student    | -.512                       | -.288                     | -3.698 | .000 |
| Engagement             | .138                        | .154                      | 2.144 | .034 |
| Self-esteem            | -.324                       | -.248                     | -3.157 | .002 |
| Seniority              | .080                        | .154                      | 2.144 | .034 |

Finally, personal accomplishment in the SET group, is significantly predicted by the model shown in Table 11 (F (3,118) = 21.348, p < .001), with 35.2% of the variance (Adjusted R Square is 33.5%).
Table 11

Model of Personal Accomplishment in the SET group

| Model                        | Unstandardized Coefficients | Standardized Coefficients | t    | Sig. |
|------------------------------|-----------------------------|---------------------------|------|------|
|                              | B  | Std. Error | Beta |      |      |
| (Constant)                   | -1.285 | 5.187   |      | .248 | .805 |
| Assertiveness                | .147 | .046     | .287 | 3.195| .002 |
| Efficacy in Student Engagement| .961 | .327     | .262 | 2.936| .004 |
| Efficacy in Classroom Management| .478 | .239     | .181 | .001 | .048 |

a. Dependent Variable: Personal Accomplishment

In the RET group, dimension of personal accomplishment, is significantly predicted by the model in Table 12 (F (3,153) = 28.867, p < .001), with 36.1% of the explained variance (Adjusted R Square was 35%).

Table 12

Model of Personal Accomplishment in the RET group

| Model                        | Unstandardized Coefficients | Standardized Coefficients | t    | Sig. |
|------------------------------|-----------------------------|---------------------------|------|------|
|                              | B  | Std. Error | Beta |      |      |
| (Constant)                   | 5.142 | 3.996   |      | .287 | .200 |
| Efficacy in Student Engagement| .778 | .180     | .322 | .331 | .000 |
| Self-esteem                  | .495 | .134     | .279 | .705 | .000 |
| Social Support               | .121 | .055     | .161 | .217 | .028 |

a. Dependent Variable: Personal Accomplishment

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 studies. If we compare all three groups, we see that OTSE working in special schools exhibit slightly higher levels of burnout than others in emotional exhaustion and reduced personal accomplishment. Some studies support this finding, indicating that the type of education, or qualification for work, affect burnout syndrome. 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 student. 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 exhaustion. 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. 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 objective 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, 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, depersonalization 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 beliefs about one’s own efficacy increase one’s sense of self-worth. Other studies have confirmed the correlation between self-efficacy and burnout syndrome too. 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 needs. Considering that emotional exhaustion, as the first stage of burnout syndrome, actually arises in response to stress, work problems and unfulfilled expectations, 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 importance 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 exhaustion. 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 our people.
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 work\(^39\), 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 satisfaction\(^40\).

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 avoided\(^22\).

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-efficacy\(^41\). 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 behavior\(^42\).

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 depersonalization. Although the opposite is often confirmed \(^6\), 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**

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.

**References**
1. *Maslach C, Jackson S E, Leiter MP*. Maslach burnout inventory: manual. Palo Alto, Consulting Psychologists Press, California, 1996.

2. *Dedić G*. Professional burnout. Vojnosanit Pregl 2005; 62(11): 851-855. (Serbian)

3. *WHO*. International 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%2ficd%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 the Schools 2017; 54(5): 472-486.

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: 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, Horenczyk 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): 20-27.

10. *Küçüküşüleymanoğlu 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. (Serbian), Available from: http://defektolozisrbije.org/wp-content/uploads/2016/05/UNICEF.pdf

12. *Jovanović RV, Krajnović D, Mihajlović 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; doi: 10.1080/08856257.2019.1572092.

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: 163-182.

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: 2476-2488.

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, Alsaheer 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: 127-134.

20. Ahtar S. The psychology of kindness, Clio, Beograd 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-Marti 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): 110-119.

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): 382-389.

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): 177-186.
25. Tovilović S, Okanović P, Krstić T. Assertiveness Assessment. U Biro M, Smederevac S, Novović Z. (Ur.). Evaluation of Psychological and Psychopathological Phenomena Belgrade: Serbian Psychological Society 2009; 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: 783-805.

28. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multidimensional scale of perceived social support. J Pers Assess 1988; 52: 30-41.

29. Janković S, Ražnatović M, Marinković J, Maksimović N, Janković J, Dikanović B. Relevance of psychosomatic factors in psoriasis: A case-control study. Acta Derm Venereol. 2009; 89: 364–68.

30. Milenović M. Study of burnout syndrome in anesthesiologists, working in the tertiary level medical health institutions in Belgrade [dissertation]. Belgrade: School of Medicine; 2015 (Serbian).

31. Tabachnick BG, Fidell LS. Using multivariate statistics (5th edn). 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): 2874-2889.

34. Monsen JJ, Ewing DL, Kwoka M. Teachers’ attitudes towards inclusion, perceived adequacy of support and classroom learning environment. Learn Environ Res 2014; 17:113–126.

35. Jurado MDMM, Pérez-Fuentes MDC, Atria L, Ruiz NFO, Linares JJG. Burnout, perceived efficacy, and job satisfaction: Perception of the educational context in high school researchers. Biomed Res Int 2019; in press doi: 10.1155/2019/1021408 Available from: https://www.hindawi.com/journals/bmri/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. Jurado MDMM, 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 W.B. Schaufeli, C. Maslach, Marek, T, editors. Professional burnout: Recent developments in theory and research (pp. 1-16). Washington, DC: Taylor & Francis, 1993.

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): 521-540.

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. Teaching elementary physical education 2006; 17: 43–47.

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): 153-162.

44. Kozak 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: 102-115.

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