Nastava i vaspitanje, 2026, *75*(2), 305-324
https://doi.org/10.5937/niv75-62646

ISSN 0547-3330
eISSN 2560-3051
Originalni naučni rad

Lične i školske karakteristike kao prediktori sindroma sagorevanja nastavnika u Srbiji

Stanislava Marić Jurišin
Odsek za pedagogiju, Filozofski fakultet,
Univerzitet u Novom Sadu, Novi Sad, Srbija
Borka Malčić
Odsek za pedagogiju, Filozofski fakultet,
Univerzitet u Novom Sadu, Novi Sad, Srbija
Snežana Jokić
Tehnički fakultet, Univerzitet u Novom Sadu, Zrenjanin, Srbija
Simona Bekić[1]
Odsek za pedagogiju, Filozofski fakultet,
Univerzitet u Novom Sadu, Novi Sad, Srbija

Apstrakt *Dosadašnja istraživanja ukazuju na zabrinjavajuće visok udeo nastavnika koji ispoljavaju simptome sindroma sagorevanja na globalnom nivou. Posledice ovog fenomena prevazilaze individualni nivo, jer narušavaju kvalitet nastavnog procesa, umanjuju motivaciju i psihološko blagostanje nastavnika i mogu negativno uticati na razvoj učenika. Zbog toga je cilj ovog istraživanja bio da ispita kako lični i školski faktori doprinose razvoju sindroma sagorevanja nastavnika u Srbiji. Na uzorku od 883 nastavnika osnovnih i srednjih škola širom Srbije, sprovedeno je istraživanje korišćenjem instrumenta Maslach Burnout Inventory – Educators Survey (MBI-ES), kao i i skupa ličnih varijabli i varijabli vezanih za radno mesto. Rezultati su pokazali umereno visok nivo emocionalne iscrpljenosti, nizak do umeren nivo depersonalizacije i visok nivo ličnog postignuća. Višestrukom regresionom analizom identifikovani su značajni prediktori dimenzija sagorevanja: radni staž, materijalni status, uzrast, tip škole i predmetna oblast za emocionalnu iscrpljenost; oblast studija za lično postignuće; te radni staž, uzrast i materijalni status za depersonalizaciju. Ovi nalazi ukazuju da se sagorevanje dešava ne samo pod uticajem individualnih faktora već i usled širih organizacionih i sistemskih uslova. Rezultati ovog istraživanja mogu poslužiti kao osnova za kreiranje strategija prevencije sagorevanja nastavnika u Srbiji i sličnim obrazovnim kontekstima. U radu se razmatraju i ograničenja, kao i smernice za buduća istraživanja.*

Ključne reči: *nastavnici, sagorevanje nastavnika, školsko okruženje, MBI-ES.*

1 simona.bekic@ff.uns.ac.rs

Uvod

Sindrom sagorevanja se najčešće definiše kao stanje emocionalne iscrpljenosti i smanjenog osećaja ličnog postignuća, koje nastaje kao odgovor na dugotrajni stres povezan sa radnim okruženjem pojedinca (Schaufeli & Buunk, 2003). Iako postoji više različitih konceptualizacija, ova pojava se najčešće određuje kroz tri dimenzije: emocionalnu iscrpljenost (EE), depersonalizaciju, odnosno, distanciranje od posla i ljudi uključenih u njega (DP) i osećaj smanjenog ličnog postignuća (PA) (Maslach et al., 2016). Različiti sociološki, ekonomski, politički i faktori sredine doprineli su porastu učestalosti sindroma sagorevanja u 21. veku. Istraživanja pokazuju da su uzroci i simptomi sindroma sagorevanja slični u različitim profesionalnim kontekstima (Marek et al., 2017; Schaufeli et al., 2009), ali studije ukazuju da je ova pojava izraženija u profesijama koje podrazumevaju rad sa ljudima, kao što su zdravstvo i obrazovanje (Durr et al., 2014).

U Srbiji, dosadašnji rezultati ukazuju na zabrinjavajuće visok nivo sagorevanja među nastavnicima (Marić i sar., 2024; Ranđelović i sar., 2013). Nastavnici su posebno podložni ovom fenomenu zbog prirode svog posla, koji podrazumeva visoke emocionalne zahteve, rad pod pritiskom i često neadekvatne uslove rada (Marić-Jurišin i Malčić, 2022; Popović i sar., 2023). Proučavanje ovog fenomena je od globalnog značaja, naročito s obzirom na njegove brojne negativne posledice: ugrožavanje zdravlja, narušavanje obrazovnog procesa, negativne uticaje na psihički i emocionalni razvoj dece (Marić i sar., 2024; Ranđelović i sar., 2013), kao i na smanjenje nastavničke efikasnosti, motivacije, samopouzdanja, samopoštovanja, produktivnosti i zadovoljstva poslom (Herman et al., 2018; Marek et al., 2017; Skaalvik & Skaalvik, 2014). Brojna psihološka i pedagoška istraživanja bavila su se sagorevanjem nastavnika (Buonomo et al., 2017; Chang, 2013; Kim & Burić, 2020; Ranđelović i sar., 2013). Međutim, mali broj studija je ispitivao uticaj složene interakcije između individualnih karakteristika i radnog okruženja na pojavu sagorevanja kod nastavnika. Zbog toga je cilj ovog istraživanja da analizira odnose između ličnih i školskih faktora i način na koji oni doprinose objašnjenju sindroma sagorevanja nastavnika u Srbiji. Dobijeni nalazi mogu imati značaj, ne samo za intervencije na nivou škole već i za kreiranje obrazovnih politika u Srbiji i sličnim kontekstima.

Prediktori sagorevanja nastavnika

Iako su pripadnici svih profesija podložni razvoju sindroma sagorevanja, on je naročito izražen među nastavnicima. Procenjuje se da sagorevanje pogađa čak 70% nastavnika tokom njihove profesionalne karijere (Piperac et al., 2021). Ovi zabrinjavajući podaci otvaraju pitanje uzroka ovakvog stanja. Postojeća literatura naglašava multifaktorsku prirodu sagorevanja kod nastavnika, koje se može objasniti kroz lične prediktore i prediktore vezane za radno okruženje.

Među ličnim karakteristikama se često izdvaja uzrast kao značajan faktor, ali rezultati nisu ujednačeni. Neka istraživanja ukazuju da je sagorevanje češće kod mlađih nastavnika (Al Asadi et al., 2018; Zhang, 2022), dok druga pokazuju više nivoe

kod starijih nastavnika (Aflakseir & Nemati, 2018; Padmanabhanunni & Pretorius, 2023; Schaufeli & Buunk, 2003). Slične nedoslednosti javljaju se i u odnosu na pol. Neke studije ukazuju na viši nivo sagorevanja kod žena (Zhang et al., 2014), dok druge pokazuju veću zastupljenost kod muškaraca (Al Asadi et al., 2018; Unterbrink et al., 2007). U finskim istraživanjima utvrđeno je da muškarci ispoljavaju viši nivo depersonalizacije, dok žene prijavljuju veću emocionalnu iscrpljenost (Saloviita & Pakarinen, 2021). Jedna meta-analiza (Yorulmaz & Altınkurt, 2018) ukazuje da je nivo obrazovanja takođe značajan faktor. Nastavnici sa višim stepenom obrazovanja pokazuju viši nivo sagorevanja i niži osećaj ličnog postignuća. Radni staž je takođe povezan sa sagorevanjem, ali rezultati variraju. Neka istraživanja ukazuju na veće sagorevanje kod iskusnijih nastavnika, dok druga pokazuju suprotan trend. Niži materijalni status povezan je sa višim nivoom sagorevanja (Candeias et al., 2020). Ove razlike mogu delimično biti posledica kulturoloških specifičnosti i specifičnosti obrazovnog konteksta, koje se često ne uzimaju u obzir u dovoljnoj meri tokom kvantitativnih istraživanja.

Kada je reč o karakteristikama radnog okruženja, istraživanja ukazuju na razlike između različitih nivoa obrazovanja. Dok neka istraživanja ne nalaze značajne razlike između nastavnika u osnovnim i srednjim školama (Rajendran et al., 2020), druga pokazuju da nastavnici na nižim nivoima obrazovanja imaju veći rizik od sagorevanja u okviru svih dimenzija (Kimsesiz, 2019). Razlike su uočene i između tipova škola. Na primer, nastavnici u stručnim školama pokazuju viši nivo sagorevanja u odnosu na nastavnike u gimnazijama, delom zbog nižeg osećaja nagrađenosti i profesionalnog statusa (Unterbrink et al., 2007). Takođe, uočene su razlike između nastavnika različitih predmetnih oblasti (npr. društvene nauke u odnosu na „STEM" oblasti (nauka, tehnologija, inženjerstvo i matematika)) (Agyapong et al., 2022; Saloviita & Pakarinen, 2021).

Cilj istraživanja i hipoteze

Cilj ovog istraživanja je da utvrdi i analizira složene odnose između ličnih karakteristika, karakteristika radnog mesta nastavnika i načina na koji one doprinose objašnjenju sindroma sagorevanja nastavnika u Srbiji. Na osnovu pregleda literature i specifičnosti konteksta, formulisane su sledeće hipoteze. H_0: *Ne postoji značajna povezanost između ličnih i profesionalnih karakteristika i nivoa sagorevanja nastavnika*. H_1: *Postoji značajna povezanost između ličnih karakteristika, radnog okruženja i nivoa sagorevanja nastavnika*. Specifične hipoteze su:

X1: Nastavnici sa dužim radnim stažom imaju viši nivo sagorevanja.

X2: Nastavnici sa lošijim materijalnim statusom imaju viši nivo sagorevanja.

X3: Stariji nastavnici imaju niži nivo sagorevanja u odnosu na mlađe nastavnike.

X4: Postoje razlike u nivou sagorevanja u zavisnosti od tipa škole.

X4.1: Nastavnici u osnovnim školama imaju viši nivo sagorevanja u odnosu na nastavnike u srednjim školama.

X4.2: Nastavnici u prvom ciklusu osnovne škole imaju viši nivo sagorevanja u odnosu na nastavnike u drugom ciklusu.

X5: Nastavnici društvenih, umetničkih i praktičnih predmeta imaju niži nivo sagorevanja u odnosu na nastavnike predmeta iz oblasti prirodnih nauka.

X6: Odeljenjsko starešinstvo je povezano sa višim nivoom sagorevanja.

X7: Pol i nivo obrazovanja nisu značajni prediktori sagorevanja.

Metod

Kontekst istraživanja

Istraživanje je sprovedeno u Srbiji, gde je osnovno obrazovanje osmogodišnje, a sastoji se iz dva obrazovna ciklusa: prvog ciklusa (od 1. do 4. razreda), u kome nastavu izvode učitelji, i drugog ciklusa (od 5. do 8. razreda), koji se zasniva na predmetnoj nastavi, odnosno, nastavi koju realizuju različiti nastavnici za pojedinačne predmete. Javno osnovno obrazovanje je obavezno i besplatno (Eurydice, 2025), nakon čega učenici mogu nastaviti školovanje u četvorogodišnjim gimnazijama ili srednjim stručnim školama. Putevi inicijalnog obrazovanja nastavnika razlikuju se u zavisnosti od nastavničke uloge. Učitelji se obrazuju na učiteljskim fakultetima kroz programe usmerene na pedagogiju, didaktiku i praktičnu nastavu, najčešće kroz četvorogodišnje osnovne studije, nakon čega sledi jednogodišnji master program. Predmetni nastavnici, koji predaju u višim razredima osnovne škole i u srednjim školama, obrazuju se pre svega na fakultetima odgovarajućih naučnih oblasti, nakon čega stiču pedagoško-psihološko-didaktičke kompetencije. Od 2013. godine postoji i alternativni put, koji omogućava diplomcima nenastavničkih studijskih programa da steknu master iz oblasti obrazovanja i uđu u nastavničku profesiju (Maghnouj et al., 2020). Iako je formalno propisano da svi nastavnici moraju imati master diplomu, varijabla „nivo obrazovanja" u ovom istraživanju odražava razlike u stečenim akademskim stepenima i obrazovnim putanjama, a ne formalnu podobnost za rad.

Ove razlike u pripremi nastavnika mogu dovesti do različitih profesionalnih iskustava. Učitelji su više usmereni ka holističkom razvoju deteta i dugoročnim odnosima sa učenicima, dok predmetni nastavnici stavljaju veći akcenat na predmetno znanje i nastavu specifičnog predmeta (Maghnouj et al., 2020). Istovremeno, obrazovni sistem u Srbiji suočava se sa brojnim strukturnim izazovima. Javna ulaganja u obrazovanje relativno su niska (oko 4% BDP-a), što je ispod proseka OECD-a, a nedovoljno finansiranje je posebno izraženo u srednjem obrazovanju (Maghnouj et al., 2020). Nastavnički kadar stari, većinski je ženskog pola i često je obeležen tradicionalnim pedagoškim pristupima koji zaostaju za savremenim modelima nastave sa učenikom u centru obrazovno-vaspitnih aktivnosti. Plate nastavnika su relativno niske, dok su mogućnosti napredovanja ograničene složenim procedurama i slabim finansijskim podsticajima. Stručno usavršavanje se uglavnom finansira na lokalnom nivou i često zavisi od spoljnih izvora ili ličnih ulaganja nastavnika, usled nestabilnog centralnog finansiranja i ograničenih budžeta lokalnih samouprava (Eurydice, 2025; Maghnouj et al., 2020).

Uzorak

Struktura uzorka prikazana je u Tabeli 1. Tokom realizacije istraživanja, autori su se pridržavali Kodeksa akademskog integriteta Univerziteta u Novom Sadu, posebno člana 7, koji se odnosi na „naučnoistraživački rad sa ispitanicima" (Univerzitet u Novom Sadu, 2020). Učesnici su bili informisani o etičkim procedurama i učestvovali su dobrovoljno.

Tabela 1
Struktura uzorka (N = 883)

Varijabla	Nivo	Broj	Procenat
Pol	Muški	132	14.9
	Ženski	751	85.1
Starosna grupa	24-30	55	6.2
	31-40	183	20.7
	41-50	320	36.2
	51-60	264	29.9
	61+	61	6.9
Radni staž	1-5	91	10.3
	6-15	219	24.8
	16-25	304	34.4
	25+	269	30.5
Nivo obrazovanja	Osnovne studije	405	45.9
	Master studije	442	50.1
	Specijalističke studije	26	2.9
	Doktorske studije	10	1.1
Ekonomski status	Isto kao i većina	588	66.6
	Lošije od većine	234	26.5
	Bolje od većine	61	6.9
Okruženje škole	Urbano	568	64.3
	Ruralno	315	35.7
Tip škole	Osnovna škola – prvi ciklus	246	27.9
	Osnovna škola – drugi ciklus	375	42.5
	Srednja stručna škola	164	18.6
	Gimnazija	77	8.7
	Srednja umetnička škola	21	2.4

Instrumenti

Prvi deo instrumenta obuhvatao je pitanja koja se odnose na lične karakteristike ispitanika i kontekst rada, kao što su: pol, uzrast, radni staž (broj godina provedenih u nastavi), nivo obrazovanja (završene osnovne, master, specijalističke ili doktorske studije), okruženje škole (urbano/ruralno), tip škole, oblast nastave (grupa predmeta), status odeljenjskog starešine, materijalni status i učešće u aktivnostima stručnog usavršavanja. U Srbiji, prosvetni radnici imaju zakonsko pravo i obavezu da se godišnje uključuju u različite oblike stručnog usavršavanja (Ministarstvo prosvete, nauke i tehnološkog razvoja, 2021). U istraživanju je učešće u aktivnostima stručnog usavršavanja operacionalizovano kroz samoocenjenu učestalost na godišnjem nivou (u rasponu od nepohađanja do učestalog pohađanja). Drugi deo instrumenta činio je upitnik Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach & Jackson, 1981) koji meri sindrom sagorevanja kod nastavnika. Ova skala sadrži 22 stavke koje mere tri dimenzije sagorevanja (emocionalna iscrpljenost – EE, lično postignuće – PA i depersonalizacija – DP), a odgovori se daju na sedmostepenoj Likertovoj skali (od 0 = nikada do 6 = svaki dan). Skala je u ovom istraživanju pokazala dobru unutrašnju konzistentnost, pri čemu su vrednosti Kronbahove alfe za sve podskale bile iznad .70.

Postupak i plan analize podataka

Istraživanje je sprovedeno putem upitnika, kao transverzalno istraživanje, uz primenu prigodnog uzorkovanja. Podaci su prikupljeni tokom juna i jula 2024. godine putem onlajn upitnika kreiranog u Google Forms-u. Link ka anketi distribuiran je putem zvaničnih školskih mejling lista i profesionalnih grupa na društvenim mrežama. Učešće je bilo dobrovoljno i anonimno, a svi ispitanici su pre popunjavanja upitnika dali pristanak za učešće u istraživanju. U analizu su uključeni samo upitnici koji su bili potpuno popunjeni.

Prvo su izračunate deskriptivne statistike za sve varijable. Pirsonovi koeficijenti korelacije korišćeni su za ispitivanje povezanosti između subskala sagorevanja i socio-demografskih i varijabli radnog mesta. Višestruka linearna regresiona analiza primenjena je radi identifikacije prediktora svake od tri dimenzije sagorevanja. Pre sprovođenja regresione analize, proverene su pretpostavke normalnosti, linearnosti, homoskedastičnosti, kao i odsustva multikolinearnosti. Za ispitivanje razlika između nastavnika prvog i drugog ciklusa osnovne škole, sprovedene su dodatne analize na poduzorku nastavnika zaposlenih u osnovnim školama, uz primenu *t*-testa i χ^2 testa nezavisnosti. Sve statističke analize izvršene su u programu IBM SPSS Statistics 26.

Rezultati

Deskriptivna statistika

Na osnovu klasifikacije rezultata iz MBI priručnika (Maslach et al., 2016), deskriptivni pokazatelji (Tabela 2) ukazuju na umereno visok nivo emocionalne iscrpljenosti (EE), nizak do umeren nivo depersonalizacije (DP) i visok nivo ličnog postignuća (PA).

Tabela 2
Deskriptivne statistike subskala sagorevanja nastavnika (N = 883)

Subskala	Raspon	*M*	*SD*	Varijansa
Emocionalna iscrpljenost	0-60	3.29	1.82	3.31
Lično postignuće	8-39	4.41	1.36	1.88
Depersonalizacija	0-22	1.43	1.56	2.50

Napomena. *N* predstavlja broj ispitanika; *M* predstavlja prosek; *SD* predstavlja standardnu devijaciju.

Približno 60% nastavnika u našem uzorku iskusilo je hroničnu emocionalnu iscrpljenost. Varijabilnost rezultata ukazuje da postoji značajna podgrupa nastavnika sa veoma visokim nivoom iscrpljenosti, iako su prosečni nivoi EE umereno visoki. Ispitanici su u proseku prijavili nizak nivo depersonalizacije. Međutim, zabrinjavajući trend uočen je kod stavke DP11 – „Brinem da me ovaj posao emocionalno opterećuje" (*M* = 3.29), što ukazuje da deo nastavnika strahuje od emocionalnog udaljavanja od svog posla i učenika. Uočena varijabilnost ukazuje da pojedine podgrupe nastavnika mogu biti u većem riziku i da zahtevaju dodatnu pažnju i ciljanu podršku. Nastavnici su iskusili visoke nivoe ličnog postignuća (PA), što ukazuje na snažan osećaj profesionalne kompetentnosti i uspeha. Visoki rezultati na ovoj subskali ukazuju da, uprkos prisustvu emocionalne iscrpljenosti, postoji značajan zaštitni faktor u vidu profesionalne efikasnosti i osećaja ličnog ispunjenja.

Povezanost socio-demografskih i karakteristika radnog mesta sa dimenzijama sagorevanja

Pirsonovi koeficijenti korelacije izračunati su radi ispitivanja povezanost između socio-demografskih varijabli i varijabli vezanih za radno mesto (stavke 1–10), kao i tri subskale sagorevanja merene MBI-ES instrumentom (Tabela 3). Cilj ove analize bio je da se identifikuju potencijalni protektivni faktori i faktori rizika, kao i grupe nastavnika koje su potencijalno osetljivije na sagorevanje. Subskale sagorevanja su značajno međusobno povezane u očekivanim teorijskim pravcima, što je u skladu sa multidimenzionalnom strukturom sagorevanja (Maslach et al., 2016).

Uočena je značajna negativna korelacija između materijalnog statusa, tipa škole, radnog staža, uzrasta i pola sa emocionalnom iscrpljenošću (EE). Nije utvrđena značajna povezanost između EE i oblasti nastave, kao ni statusa odeljenjskog starešine. Kada je reč o depersonalizaciji (DP), uočene su korelacije sa statusom odeljenjskog starešine, učešćem u stručnom usavršavanju i materijalnim statusom. Nije utvrđena značajna povezanost između DP i uzrasta, pola, radnog staža, nivoa obrazovanja ili grupe predmeta. Subskala ličnog postignuća (PA) povezana je sa statusom odeljenjskog starešine, oblašću nastave i tipom škole. Nije utvrđena značajna povezanost PA sa polom, uzrastom, radnim stažom, materijalnim statusom ili nivoom obrazovanja nastavnika.

Tabela 3
Korelacije socio-demografskih i karakteristika radnog mesta i subskala sagorevanja nastavnika

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Pol	1												
2. Godine	.088**	1											
3. Radni staž	.115**	.832**	1										
4. Nivo obrazovanja	-.067*	-.242**	-.226**	1									
5. Materijalni status	-.022	-.115**	-.066*	.098**	1								
6. Školsko okruženje	-.013	.063	.058	-.056	-.007	1							
7. Profesionalno usavršavanje	.019	.009	-.013	-.041	-.007	-.015	1						
8. Tip škole	-.182**	-.063	-.088**	.131**	.080*	.076*	.019	1					
9. Status odeljenskog starešine	.173**	.099**	.147**	-.088**	-.046	.023	.000	-.654**	1				
10. Grupa predmeta	.061	.088*	.100**	-.023	-.026	.063	.034	-.473**	.920**	1			
11. EE	.073*	.061	.135**	-.043	-.196**	.025	-.018	-.069*	.007	-.041	1		
12. PA	.020	.018	.039	-.003	.029	.008	.026	-.118**	.189**	.148**	-.326**	1	
13. DP	-.014	-.014	.035	.016	-.087**	.014	-.066*	.031	-.074*	-.046	.606**	-.459**	1

Napomena. ** –- korelacija je statistički značajna na nivou 0.01; * - korelacija je statistički značajna na nivou 0.05; *EE* – emocionalna iscrpljenost; *PA* – lično postignuće; *DP* – depersonalizacija.

Višestruka linearna regresija

Da bi se ispitalo kako pol, uzrast, radni staž, nivo obrazovanja, materijalni status, okruženje škole, tip škole, status odeljenjskog starešine, učešće u programima stručnog usavršavanja i oblast nastave predviđaju sagorevanje nastavnika, sprovedena je višestruka linearna regresiona analiza.

Emocionalna iscrpljenost

Analiza varijanse pokazala je da je ukupni regresioni model za predviđanje EE statistički značajan, $F(10, 721) = 6.86$, $p < .001$ (Tabela 4). Prediktori zajedno objašnjavaju približno 8.7% varijanse EE ($R^2 = .09$, korigovani $R^2 = .07$), što je, iako umereno, značajno u kontekstu složenih psiholoških konstrukata, u koje spada i sagorevanje. Standardna greška procene iznosila je 12.40.

Tabela 4

Rezime analize varijanse regresionog modela za predviđanje emocionalne iscrpljenosti

Model		*SS*	*df*	*MS*	*F*	*Sig.*
	Regresija	10545.60	10	1054.56	6.86	.000
1	Ostatak	110826.31	721	153.71		
	Ukupno	121371.92	731			

Napomena. *SS* predstavlja sumu kvadrata; *df* predstavlja stepene slobode; *MS* predstavnja srednju kvadratnu vrednost; *F* predstavlja *F*-vrednost; *Sig.* predstavlja p-vrednost.

Tabela 5

Regresioni koeficijenti za predviđanje emocionalne iscrpljenosti

Prediktor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Konstanta)	34.45	4.17	—	8.27	.00
Pol	.96	1.26	.03	.76	.45
Godine	-2.43	.81	-.19	-2.98	.00
Radni staž	3.99	.85	.30	4.71	.00
Nivo obrazovanja	.34	.78	.02	.44	.66
Materijalni status	-4.43	.87	-.18	-5.07	.00
Školsko okruženje	1.20	.98	.04	1.22	.22
Profesionalno usavršavanje	-.01	.56	-.00	-.02	.98
Tip škole	-1.24	.50	-.10	-2.50	.01
Status odeljenskog starešine	.91	.47	.18	1.92	.05
Grupa predmeta	-1.40	.47	-.28	-3.01	.00

Napomena. *B* predstavlja nestandardizovani koeficijent; *SE B* predstavlja standardnu grešku koeficijenta; *β* označava standardizovani koeficijent; *t* označava *t*-vrednost; a *p* označava *p*-vrednost.

Regresiona analiza (Tabela 5) pokazala je nekoliko značajnih prediktora EE. Radni staž se izdvojio kao najjači pozitivan prediktor, a sa porastom staža, vrednosti EE rastu u proseku za oko 4 poena. Uzrast je imao značajnu negativnu povezanost sa EE, smanjujući vrednosti za oko 2.4 poena. Oblast nastave takođe je značajan prediktor – nastavnici društvenih, praktičnih i umetničkih predmeta prijavljuju niže nivoe EE u odnosu na nastavnike prirodnih nauka. Materijalni status je negativno povezan sa EE, što znači da nastavnici sa boljim finansijskim uslovima imaju manji nivo iscrpljenosti. Tip škole se takođe pokazao kao značajan prediktor; nastavnici u srednjim školama imaju niži nivo EE u odnosu na nastavnike u osnovnim školama. Takođe, status odeljenjskog starešine pokazao je graničnu statističku značajnost, što ukazuje na moguću tendenciju višeg EE kod odeljenskih starešina, ali ovaj nalaz zahteva dodatna istraživanja. Pol, okruženje škole, nivo obrazovanja i učešće u stručnom usavršavanju nisu se pokazali kao značajni prediktori EE.

Lično postignuće

Analiza varijanse pokazala je da je regresioni model za PA statistički značajan, $F(10.721) = 2.44$, $p = .007$ (Tabela 6). Prediktori su zajednički objasnili približno 3.3% varijanse ličnog postignuća (PA) ($R^2 = .03$, korigovani $R^2 = .02$). Iako je ovaj procenat skroman, rezultat je značajan u kontekstu proučavanja složenih ljudskih stanja kao što je sindrom sagorevanja. Standardna greška procene iznosila je 6.96.

Tabela 6
Rezime analize varijanse regresionog modela za predviđanje ličnog postignuća

Model		SS	df	MS	F	Sig.
1	Regresija	1181.49	10	118.15	2.44	.007
	Ostatak	34917.03	721	48.43		
	Ukupno	36098.52	731			

Napomena. *SS* predstavlja sumu kvadrata; *df* predstavlja stepene slobode; *MS* predstavnja srednju kvadratnu vrednost; *F* predstavlja *F*-vrednost; *Sig*. predstavlja p-vrednost.

Regresiona analiza (Tabela 7) pokazala je da je grupa predmeta koju nastavnik predaje najjači pozitivan prediktor ličnog postignuća (PA), što ukazuje da nastavnici društvenih, umetničkih i praktičnih predmeta iskazuju značajno više nivoe PA u odnosu na nastavnike prirodnih nauka. Status odeljenjskog starešine pokazao je granično statistički značajnu negativnu povezanost sa PA, što ukazuje na moguću tendenciju nešto nižeg nivoa PA kod odeljenjskih starešina, iako ovaj nalaz nije dostigao uobičajene nivoe statističke značajnosti. Slično tome, materijalni status pokazao je granično pozitivnu povezanost sa PA, što sugeriše da nastavnici sa boljim finansijskim statusom mogu imati nešto više nivoe PA. Ostale varijable – tip škole, radni staž, uzrast, pol, okruženje škole, nivo obrazo-

vanja i učešće u stručnom usavršavanju – nisu se pokazale kao značajni prediktori nivoa PA u ovom modelu.

Tabela 7
Regresioni koeficijenti za predviđanje ličnog postignuća

Prediktor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Konstanta)	30.63	2.34	—	13.09	.00
Pol	.52	.71	.030	.74	.46
Godine	-.06	.46	-.01	-.13	.89
Radni staž	-.15	.48	-.02	-.32	.75
Nivo obrazovanja	.20	.44	.02	.47	.64
Materijalni status	.81	.49	.06	1.66	.09
Školsko okruženje	.09	.55	.01	.16	.87
Profesionalno usavršavanje	.18	.32	.02	.57	.57
Tip škole	.07	.28	.01	.25	.80
Status odeljenskog starešine	-.44	.26	-.16	-1.68	.09
Grupa predmeta	.84	.26	.30	3.19	.00

Napomena. *B* predstavlja nestandardizovani koeficijent; *SE B* predstavlja standardnu grešku koeficijenta; *β* označava standardizovani koeficijent; *t* označava *t*-vrednost, a *p* označava *p*-vrednost.

Depersonalizacija

Analiza varijanse pokazala je da je ukupni regresioni model za predviđanje depersonalizacije (DP) statistički značajan, $F(10, 721) = 2.09$, $p = .02$ (Tabela 8). Model je objasnio približno 2,8% varijanse DP ($R^2 = .03$, korigovani $R^2 = .01$). Iako je ovaj procenat mali, nalazi mogu biti korisniji za identifikovanje rizičnih grupa nego za precizno predviđanje nivoa DP kod pojedinaca. Standardna greška procene iznosila je 4.97.

Tabela 8
Rezime analize varijanse regresionog modela za predviđanje depersonalizacije

Model		*SS*	*df*	*MS*	*F*	*Sig.*
	Regresija	515.180	10	51.518	2.09	.02
1	Ostatak	17808.683	721	24.700		
	Ukupno	18323.863	731			

Napomena. *SS* predstavlja sumu kvadrata; *df* predstavlja stepene slobode; *MS* predstavnja srednju kvadratnu vrednost; *F* predstavlja *F*-vrednost; *Sig.* predstavlja *p*-vrednost.

Regresionom analizom (Tabela 9) identifikovana su tri značajna prediktora depersonalizacije (DP). Radni staž se izdvojio kao najjači pozitivan prediktor, što ukazuje da postoji veća verovatnoća da nastavnici sa više godina radnog iskustva prijave više nivoe DP. Uzrast je imao značajnu negativnu povezanost sa DP, što znači da su stariji nastavnici manje skloni depersonalizaciji. Materijalni status se takođe pokazao kao značajan negativan prediktor, što ukazuje da nastavnici sa boljim finansijskim položajem prijavljuju niže nivoe DP. Ostale varijable – pol, okruženje škole, nivo obrazovanja, stručno usavršavanje, tip škole, status odeljenjskog starešine i grupa predmeta – nisu se pokazale kao značajni prediktori DP u ovom modelu.

Tabela 9
Regresioni koeficijenti za predviđanje depersonalizacije

Prediktor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Konstanta)	9.95	1.67	—	5.96	.00
Pol	-.43	.51	-.03	-.85	.39
Godine	-.80	.33	-.16	-2.45	.01
Radni staž	1.07	.34	.20	3.16	.00
Nivo obrazovanja	.16	.31	.02	.51	.61
Materijalni status	-.79	.35	-.08	-2.26	.02
Školsko okruženje	.20	.39	.02	.51	.61
Profesionalno usavršavanje	-.31	.23	-.05	-1.39	.16
Tip škole	-.16	.20	-.03	-.80	.42
Status odeljenskog starešine	.17	.19	.09	.91	.36
Grupa predmeta	-.29	.19	-.15	-1.56	.12

Napomena. B predstavlja nestandardizovani koeficijent; *SE B* predstavlja standardnu grešku koeficijenta; *β* označava standardizovani koeficijent; *t* označava *t*-vrednost; a *p* označava *p*-vrednost.

Razlike između nastavnika prvog i drugog ciklusa osnovne škole

Da bi se ispitale razlike između nastavnika prvog i drugog ciklusa osnovne škole, sprovedene su dodatne analize na poduzorku nastavnika zaposlenih u osnovnim školama. Nakon filtriranja podataka (tip škole = 1 ili 2) konstruisana je varijabla za grupisanje, kojom su ispitanici podeljeni na nastavnike prvog i drugog ciklusa. Raspodele rezultata za EE, DP i PA procenjene su na osnovu indikatora asimetrije i spljoštenosti, pri čemu su ocenjene kao približno normalne, što je opravdalo primenu parametarskih testova. Razlike u uzrastu i dimenzijama sagorevanja ispitivane su pomoću *t*-testa za nezavisne uzorke. Pre svake analize proverena je homogenost varijansi primenom Levenovog testa. U slučajevi-

ma kada nije bilo značajnih razlika u varijansama, primenjena je standardna verzija *t*-testa. Razlike u nivou obrazovanja analizirane su χ^2 testom nezavisnosti.

Demografske razlike između grupa nastavnika

Analizom smo najpre ispitali razlike u osnovnim demografskim karakteristikama ispitanika, konkretno u uzrastu. Rezultati *t*-testa pokazali su statistički značajnu razliku u uzrastu između nastavnika prvog i drugog ciklusa. U proseku, nastavnici prvog ciklusa bili su stariji ($M = 3.26$, $SD = 0.99$) u odnosu na nastavnike drugog ciklusa ($M = 3.01$, $SD = 0.99$), $t(524.90) = 3.13$, $p = .002$.

Dalje, χ^2 test nije pokazao statistički značajnu povezanost između uloge nastavnika i nivoa obrazovanja, $\chi^2(3) = 1.16$, $p = .762$. Obe grupe imale su sličan nivo obrazovanja, pri čemu je većina nastavnika u obe grupe završila osnovne ili master studije.

Tabela 10
Struktura nivoa obrazovanja nastavnika prvog i drugog ciklusa

Nivo obrazovanja	Nastavnici prvog ciklusa %	Nastavnici drugog ciklusa %	Suma %
Osnovne studije	52.4	48.3	49.9
Master studije	44.7	48.8	47.2
Specijalističke studije	2.0	1.9	1.9
Doktorske studije	0.8	1.1	1.0
Suma	100.0	100.0	100.0

Razlike u nivou sagorevanja između grupa nastavnika

Rezultati *t*-testa nisu pokazali statistički značajnu razliku u nivou emocionalne iscrpljenosti (EE) između nastavnika prvog i drugog ciklusa. Iako su nastavnici drugog ciklusa prijavili nešto viši prosek ($M = 3.43$, $SD = 1.39$) u odnosu na nastavnike prvog ciklusa ($M = 3.33$, $SD = 1.39$), ta razlika nije bila statistički značajna, $t(619) = -0.86$, $p = .388$. S druge strane, utvrđena je statistički značajna razlika u nivou ličnog postignuća (PA). Nastavnici prvog ciklusa prijavili su više vrednosti ($M = 4.69$, $SD = 0.83$) u odnosu na nastavnike drugog ciklusa ($M = 4.28$, $SD = 0.85$), $t(619) = 5.85$, $p < .001$). Takođe je uočena statistički značajna razlika u nivou depersonalizacije (DP). Nastavnici drugog ciklusa pokazali su više vrednosti ($M = 1.53$, $SD = 0.96$) u odnosu na nastavnike prvog ciklusa ($M = 1.32$, $SD = 1.00$), $t(619) = -2.65$, $p = .008$.

Diskusija

Cilj ovog istraživanja bio je da ispita odnose između ličnih i faktora radnog okruženja, kao i njihov doprinos sagorevanju nastavnika u Srbiji. Rezultati su pokazali značajnu

povezanost ovih faktora sa nivoom sagorevanja, čime je nulta hipoteza odbačena. Nastavnici su istovremeno prijavili visok nivo ličnog postignuća i povišene nivoe emocionalne iscrpljenosti i depersonalizacije. Ovaj paradoks može ukazivati na razliku između percipirane vrednosti rada i "emocionalnih utrošaka": nastavnici mogu doživljavati svoj rad kao smislen i ispunjavajući, ali da pritom istovremeno nose značajno emocionalno opterećenje koje dovodi do iscrpljenosti i distanciranja od posla.

Hipoteza 1 je potvrđena, odnosno potvrđeno je da nastavnici sa dužim radnim stažom imaju viši nivo sagorevanja. Radni staž je snažno povezan sa višim EE i DP, što ukazuje na to da akumulacija stresa tokom dužeg perioda doprinosi razvoju sagorevanja. Ovo saznanje je u skladu sa prethodnim nalazima, koji pokazuju da je kod nastavnika sa više od 11 godina radnog iskustva prisutan viši nivo sagorevanja, posebno emocionalne iscrpljenosti (Yorulmaz & Altınkurt, 2018). Istovremeno, radni staž se pokazao kao pozitivan prediktor depersonalizacije, dok je uzrast nastavnika delovao kao negativan prediktor. Iako su ove varijable obično usko povezane, ovaj nalaz ukazuje da DP može biti više uslovljena dugotrajnim profesionalnim opterećenjem nego samim uzrastom. Ovo podržava teorijske modele koji naglašavaju ulogu zahteva posla i resursa u razvoju sagorevanja (Bakker & de Vries, 2021; Hakanen et al., 2006). Hipoteza 2 je takođe potvrđena, jer je niži materijalni status povezan sa većom emocionalnom iscrpljenošću i DP, dok su bolji finansijski uslovi delovali kao zaštitni faktor, što je u skladu sa prethodnim istraživanjima (Candeias et al., 2020). Potvrđena je i Hipoteza 3: stariji nastavnici pokazali su niže nivoe EE i DP, što može odražavati razvijenije mehanizme suočavanja i realnija profesionalna očekivanja, u skladu sa nalazima da su mlađi nastavnici podložniji sagorevanju (Al Asadi et al., 2018; Zhang, 2022).

Hipoteza 4, koja se odnosi na nivo sagorevanja nastavnika u različitim tipovima škola, delimično je potvrđena. Nastavnici u srednjem obrazovanju prijavili su značajno niže nivoe EE u odnosu na nastavnike u osnovnim školama, što je u skladu sa prethodnim nalazima da nastavnici u osnovnim školama često rade u emocionalno zahtevnijim uslovima sa manjim stepenom autonomije (Kimsesiz, 2019). Dodatne analize kojima smo poredili nastavnike prvog i drugog ciklusa osnovne škole nisu pokazale značajne razlike u EE, ali su otkrile razlike u drugim dimenzijama sagorevanja. Nastavnici prvog ciklusa prijavili su više nivoe ličnog postignuća, što se može objasniti kontinuiranim odnosom sa učenicima, većom vidljivošću pedagoškog uticaja i jasnijem uviđanju rezultata rada, što se sve smatra zaštitnim faktorima od sagorevanja (Saloviita & Pakarinen, 2021; Skaalvik & Skaalvik, 2018). Nasuprot tome, nastavnici drugog ciklusa pokazali su više nivoe DP, potencijalno zbog većeg broja učenika, fragmentiranih odnosa i jačeg pritiska procenjivanja, što može podstaći emocionalno distanciranje (Leiter et al., 2023). Ovaj obrazac podržava stanovište da je sagorevanje višedimenzionalni fenomen, koji je uslovljen sistemskim i organizacionim faktorima, uključujući organizaciju rada i dostupnost podrške (Bakker & de Vries, 2021; Hakanen et al., 2006).

Hipoteza 5 je potvrđena, jer su nastavnici društvenih, umetničkih i praktičnih predmeta prijavili niže nivoe EE i više nivoe PA u odnosu na nastavnike prirodnih nauka. Ovo je u skladu sa prethodnim istraživanjima, koja ukazuju na viši nivo sagorevanja kod na-

stavnika STEM oblasti (nauka, tehnologija, inženjerstvo i matematika), usled većeg obima posla, jačeg pritiska u vezi sa postignućima učenika, integracije tehnologije i povećanih profesionalnih zahteva (Agyapong et al., 2022; Magtalas & Eduvala, 2024; Saloviita & Pakarinen, 2021; Tu et al., 2025). Ovi nalazi podržavaju pretpostavku da nastavnici STEM oblasti mogu biti izloženi većem riziku od sagorevanja usled kumulativnih tehničkih i kurikularnih zahteva.

Hipoteza 6, koja se odnosi na funkciju odeljenjskog starešine, delimično je potvrđena. Status odeljenjskog starešine pokazao je granično značajnu tendenciju ka višem nivou EE i nižem nivou PA, iako efekat nije dostigao punu statističku značajnost u svim dimenzijama sagorevanja. Ova uloga često podrazumeva dodatne administrativne, organizacione i emocionalne obaveze izvan same nastave, kao što su intenzivna komunikacija sa roditeljima, vođenje dokumentacije i podrška učenicima. Prethodna istraživanja dosledno pokazuju da emocionalni zahtevi i administrativno opterećenje doprinose EE i DP, što podržava pretpostavku da odeljenjske starešine mogu biti izložene većem riziku od sagorevanja (Hakanen et al., 2006; Leiter et al., 2023; Skaalvik & Skaalvik, 2018).

Konačno, Hipoteza 7 je potvrđena, budući da pol i nivo obrazovanja nisu bili značajni prediktori sagorevanja. Iako se sagorevanje češće javlja kod žena, polne razlike su često uslovljene ulogama u okviru organizacije, stepenom autonomije i pozicijom u karijeri, a ne samim polom (Schaufeli & Buunk, 2003). Istraživanja o nastavnicima daju neujednačene rezultate, a neke studije ne nalaze značajne razlike, kao što je slučaj sa nastavnicima osnovnih škola u Finskoj (Saloviita & Pakarinen, 2021). Kada je reč o nivou obrazovanja, nalazi ovog istraživanja razlikuju se od ranijih studija koje ukazuju da nastavnici sa višim akademskim stepenom mogu imati viši nivo sagorevanja (Yorulmaz & Altınkurt, 2018), što ukazuje da ovaj faktor zahteva dodatna istraživanja.

Zaključak

Ovo istraživanje ispitivalo je odnos između ličnih i radnih karakteristika i sagorevanja nastavnika u srpskom obrazovnom kontekstu. Rezultati pokazuju da sagorevanje zavisi od kombinacije individualnih i kontekstualnih faktora. Pojedini faktori imaju snažniji uticaj na emocionalnu iscrpljenost i depersonalizaciju, dok drugi deluju kao zaštitni faktori, naročito u odnosu na lično postignuće. Ovi nalazi ukazuju na potrebu za sistemskim i kontekstualno osetljivim pristupom u rešavanju problema sagorevanja nastavnika, umesto fokusiranja isključivo na jačanje individualnih kapaciteta. Razumevanje povezanosti ličnih faktora u kontekstu radnog mesta i sagorevanja nastavnika može da doprinese razvoju preventivnih strategija u okviru obrazovnog sistema.

Ograničenja

Potrebno je ukazati na nekoliko ograničenja ovog istraživanja. Prvo, transverzalni dizajn istraživanja ne omogućava izvođenje uzročnih zaključaka o odnosima između ličnih i radnih karakteristika i dimenzija sagorevanja, te su longitudinalna istraživanja neophodna

radi razjašnjenja pravca ovih povezanosti tokom vremena. Drugo, objašnjena varijansa ishoda sagorevanja bila je relativno skromna, što ukazuje da drugi, neispitani faktori mogu imati značajnu ulogu. Psihološke varijable kao što su samoefikasnost, stil suočavanja i percipirana socijalna podrška nisu direktno ispitivane i trebalo bi ih uključiti u buduća istraživanja. Kulturne specifičnosti srpskog obrazovnog konteksta takođe mogu ograničiti mogućnost za generalizaciju ovih nalaza, što upućuje na činjenicu da međunarodna komparativna istraživanja mogu biti veoma značajna pri ispitivanju ovog problema. Pored toga, stručno usavršavanje je mereno isključivo kroz učestalost učešća, dok nisu razmatrani tip stručnog usavršavanja, njegov intenzitet, niti pitanje da li je bilo dobrovoljno ili obavezno, što bi trebalo preciznije ispitati u budućim studijama.

Takođe treba napomenuti da instrumenti korišćeni u ovom istraživanju, iako psihometrijski validirani, ne obuhvataju u potpunosti važne aspekte savremenog školskog konteksta, kao što su administrativno opterećenje, pritisci povezani sa eksternim evaluacijama i brze promene u planovima i programima nastave i učenja. Ovi faktori mogu predstavljati značajne izvore sagorevanja nastavnika i delimično objasniti relativno niske korelacije i ograničenu objašnjenu varijansu uočenu u ovom istraživanju (Saloviita & Pakarinen, 2021; Skaalvik & Skaalvik, 2018). Stoga, iako istraživanje doprinosi razumevanju individualnih korelata sagorevanja, ono ne pruža sveobuhvatno objašnjenje ovog fenomena, budući da ključni organizacioni i sistemski faktori nisu direktno ispitivani. U analizu su uključene samo šire karakteristike na nivou škole, kao što su tip škole, oblast nastave i okruženje škole, kao kontekstualni pokazatelji.

Preporuke

Ovo istraživanje nudi nekoliko praktičnih implikacija za srpski obrazovni sistem. Nalaz da nastavnici istovremeno prijavljuju visok nivo emocionalne iscrpljenosti i visok nivo ličnog postignuća ukazuje da prevencija sagorevanja ne treba da bude usmerena isključivo na jačanje motivacije, već i na pomoć nastavnicima da uspostave održive emocionalne granice u svakodnevnoj praksi. Buduća istraživanja bi stoga trebalo detaljnije da ispitaju konkretne izvore EE, jer bi identifikovanje ovih mehanizama moglo doprineti razvoju preciznijih intervencija i smanjenju ukupnog nivoa sagorevanja. Nalaz da radni staž, ali ne i hronološki uzrast, predviđa sagorevanje, ukazuje na značaj kumulativne izloženosti stresorima na radnom mestu, posebno u sistemima u kojima pojedinci ulaze u nastavničku profesiju kasnije u životu. Ovo ukazuje na značaj kolektivnih oblika podrške, kao što su mentorstvo među kolegama, zajednice prakse i grupno savetovanje; oblika podrške usmerenih na ublažavanje dugoročnog profesionalnog opterećenja (Farber, 2000; Ly & Hong, 2025).

Povezanost između nižeg materijalnog statusa i višeg nivoa sagorevanja dodatno naglašava značaj strukturnih ekonomskih uslova, što znači da unapređenje finansijske sigurnosti nastavnika može predstavljati važnu strategiju prevencije. Razlike između nastavnika prvog i drugog ciklusa, posebno viši nivo PA i niži nivo DP kod nastavnika prvog ciklusa, zaslužuju dodatnu pažnju, jer ovi nastavnici mogu predstavljati korisne modele

adaptivne prakse. Viši nivo sagorevanja kod nastavnika iz STEM oblasti može odražavati rastuće kurikularne i tehnološke zahteve, što ukazuje na potrebu za ciljanim stručnim usavršavanjem, jačom kadrovskom podrškom i zajedničkim planiranjem nastave (Voogt et al., 2011). Na kraju, uloga odeljenjskog starešine ostaje nedovoljno istražena, ali potencijalno predstavlja jedan od ključnih faktora u razumevanju sagorevanja nastavnika, što ukazuje na potrebu za daljim istraživanjima i razmatranjem jačanja institucionalne podrške ovoj ulozi. Globalno posmatrano, sagorevanje treba razumeti kao rezultat interakcije individualnih i kontekstualnih faktora, a ne isključivo kao individualni problem (Bakker & de Vries, 2021; Hakanen et al., 2006). Stoga preventivni programi treba da obuhvate ne samo intervencije na nivou pojedinca, već i sistemske promene, kao što su smanjenje administrativnog opterećenja, manji broj učenika u odeljenjima, jačanje formalnog sistema mentorstva i podrške školskog rukovodstva (Leiter et al., 2023). Budući da naše istraživanje nije u potpunosti obuhvatilo ove faktore, naglašava se potreba za budućim istraživanjima usmerenim na mehanizme institucionalne podrške i sistemske uslove koji potencijalno utiču na sagorevanje nastavnika.

Dostupnost podataka

Podaci koji podržavaju nalaze ovog istraživanja dostupni su na zahtev upućen autoru.

Izjava o upotrebi generativne veštačke inteligencije (VI) u naučnom pisanju

Tokom pripreme ovog rada korišćena je VI alat za stilsku obradu teksta, međutim, sadržaj i naučni zaključci su isključivo proizvodi rada autora.

Literatura

Aflakseir, A., & Nemati, O. (2018). Association Between Work—Related Stress and Burnout Among a Group of the Elementary and High School Teachers in Zarrin—Dasht—Fars. *International Journal of School Health*, *5*(2), 1-4. https://doi.org/10.5812/intjsh.64096

Agyapong, B., Obuobi-Donkor, G., Burback, L., & Wei, Y. (2022). Stress, Burnout, Anxiety and Depression among Teachers: A Scoping Review. *International Journal of Environmental Research and Public Health*, *19*(17), 10706. https://doi.org/10.3390/ijerph191710706

Al Asadi, J., Khalaf, S., Al Waaly, A., Abed, A., & Shami, S. (2018). Burnout among primary school teachers in Iraq: Prevalence and risk factors. *Eastern Mediterranean Health Journal*, *24*(3), 262–268. https://doi.org/10.26719/2018.24.3.262

Bakker, A. B., & de Vries, J. D. (2021). Job demands–resources theory and self-regulation: New explanations and remedies for job burnout. *Anxiety, Stress, & Coping, 34*(1), 1–21. https://doi.org/10.1080/10615806.2020.1797695

Buonomo, I., Fatigante, M., & Fiorilli, C. (2017). Teachers' Burnout Profile: Risk and Protective Factors. *The Open Psychology Journal*, *10*(1), 190–201. https://doi.org/10.2174/1874350101710010190

Candeias, A., Galindo, E., Calisto, I., Borralho, L., & Reschke, K. (2020). Stress and burnout in teaching. Study in an inclusive school workplace. *Health Psychology Report*, *9*(1), 63–75. https://doi.org/10.5114/hpr.2020.100786

Chang, M. L. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehaviour: Appraisal, regulation and coping. *Motivation and Emotion, 37*(4), 799-817.http://dx.doi.org/10.1007/s11031-012-93350

Durr, T., Chang, M.-L., & Carson, R. L. (2014). Curbing teacher burnout: the transactional factors of teacher efficacy and emotion management. In P. W. Richardson, S. A. Karabenick, & H. M. G. Watt (Eds.), *Teacher motivation: Theory and practice* (pp. 198–213). Routledge.

Eurydice. (2025). *Serbia overview.* European Education and Culture Executive Agency. https://eurydice.eacea.ec.europa.eu/eurypedia/serbia/overview

Farber, B. A. (2000). Treatment strategies for different types of teacher burnout. Journal of Clinical psychology, 56(5), 675-689. https://doi.org/10.1002/(SICI)1097-4679(200005)56:5%3C675::AID-JCLP8%3E3.0.CO;2-D

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43* (6), 495 -513. https://www.wilmarschaufeli.nl/publications/Schaufeli/246.pdf

Herman, K. C., Hickmon-Rosa, J. E., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions, 20*(2), 90–100. https://doi.org/10.1177/1098300717732066.

Kim, L. E., & Burić, I. (2020). Teacher self-efficacy and burnout: Determining the directions of prediction through an autoregressive cross-lagged panel model. *Journal of Educational Psychology*, *112*(8), 1661–1676. https://doi.org/10.1037/edu0000424

Kimsesiz, F. (2019). The effect of school type on EFL teachers' burnout: The case in Turkey. *Dil ve Dilbilimi Çalışmaları Dergisi*, *15*(4), 1413–1425. https://doi.org/10.17263/jlls.668533

Leiter, M. P., Maslach, C., & Schaufeli, W. B. (2023). Burnout at work: A psychological perspective. *Current Directions in Psychological Science, 32*(1), 3–9. https://www.researchgate.net/publication/263809792_Burnout_at_Work_A_Psychological_Perspective_an_edited_volume

Ly, N. T., & Hong, N. V. (2025). Effects of professional learning communities on job satisfaction of female teachers in Vietnam. *International Journal of Evaluation and Research in Education (IJERE), 14*(1), 85-93.

Maghnouj, S., Bethell, G., Guthrie, C., Kitchen, H., & Salinas, D. (2020). *OECD reviews of evaluation and assessment in education: Serbia*. OECD Publishing. https://doi.org/10.1787/225350d9-en

Magtalas, S. A., & Eduvala, J. C. (2024). Teacher's workload in relation to burnout and work performance. *International Journal of Multidisciplinary: Applied Business and Education Research, 5*(10), 4111–4123. https://doi.org/10.11594/ijmaber.05.10.24

Marek, T., Schaufeli, W. B., & Maslach, C. (2017). *Professional burnout: Recent developments in theory and research.* Routledge.

Marić Jurišin, S. i Malčić, B. (2022). *Samoprocena nastavničke profesije u savremenom obrazovnom kontekstu.* Filozofski fakultet Univerziteta u Novom Sadu.

Marić, N., Maksimović, N., i Bulat, P. (2024). Sindrom sagorevanja na radu kod prosvetnih radnika. *Medicinski podmladak, 71*(2), 258-268.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, *2*(2), 99–113. https://doi.org/10.1002/job.4030020205

Maslach, C., Jackson, S. E., & Leiter, M. P. (2016). *Maslach Burnout Inventory Manual* (Fourth Edition). Mind Garden.

Pravilnik o stalnom stručnom usavršavanju i napredovanju u zvanja nastavnika, vaspitača i stručnih saradnika (2021). Prosvetni glasnik, Službeni glasnik RS, br.109/2021.

Padmanabhanunni, A., & Pretorius, T. B. (2023). Teacher Burnout in the Time of COVID-19: Antecedents and Psychological Consequences. *International Journal of Environmental Research and Public Health*, *20*(5), 4204. https://doi.org/10.3390/ijerph20054204

Piperac, P., Todorovic, J., Terzic-Supic, Z., Maksimovic, A., Karic, S., Pilipovic, F., & Soldatovic, I. (2021). The Validity and Reliability of the Copenhagen Burnout Inventory for Examination of Burnout among Preschool Teachers in Serbia. *International Journal of Environmental Research and Public Health*, *18*(13), 6805. https://doi.org/10.3390/ijerph18136805

Popović, D., Minić, V. i Antonijević, R. (2023). Kontekstualni okvir i prevencija sindroma sagorevanja profesionalaca u vaspitno-obrazovnim ustanovama. *Nastava i vaspitanje, 72*(1), 59-72. https://doi.org/10.5937/nasvas2301059P

Rajendran, N., Watt, H. M. G., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, *47*(3), 477–500. https://doi.org/10.1007/s13384-019-00371-x

Ranđelović, K., Stojiljković, S. i Milojević, M. (2013). Personalni faktori sindroma izgaranja kod nastavnika u okviru teorije samoodređenja. *Zbornik Instituta za pedagoška istraživanja*, *45*(2), 260-281. https://doi.org/10.2298/ZIPI1302260R

Saloviita, T., & Pakarinen, E. (2021). Teacher burnout explained: Teacher-, student-, and organisation-level variables. *Teaching and Teacher Education*, *97*, 103221. https://doi.org/10.1016/j.tate.2020.103221

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An Overview of 25 Years of Research and Theorizing. In M.J. Schabracq, J.A.M. Winnubst, & C.L. Cooper (Eds.), *The Handbook of Work & Health Psychology* (pp. 383–425). John Wiley & Sons. https://doi.org/10.1002/0470013400.ch19

Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International, 14*(3), 204–220. https://doi.org/10.1108/13620430910966406

Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. *Social Psychology of Education*, *21*, 1251–1275. https://doi.org/10.1007/s11218-018-9464-8

Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports, 114*(1), 68–77. https://doi.org/10.2466/14.02.PR0.114k14w0

Tu, L., Rao, Z., Jiang, H., & Dai, L. (2025). Technostress, burnout, and job satisfaction: An empirical study of STEM teachers' well-being and performance. *Behavioral Sciences, 15*(7), 992. https://doi.org/10.3390/bs15070992

Univerzitet u Novom Sadu. (2020). *Kodeks o akademskom integritetu* (prečišćen tekst). https://www.uns.ac.rs/index.php/univerzitet/javnost-rada/dokumenti/aktiuns/send/35-pravilnici/321-kodeks-o-akademskom-integritetu

Unterbrink, T., Hack, A., Pfeifer, R., Buhl-Grießhaber, V., Müller, U., Wesche, H., Frommhold, M., Scheuch, K., Seibt, R., Wirsching, M., & Bauer, J. (2007). Burnout and effort–reward-imbalance in a sample of 949 German teachers. *International Archives of Occupational and Environmental Health*, *80*(5), 433–441. https://doi.org/10.1007/s00420-007-0169-0

Voogt, J., Westbroek, H., Handelzalts, A., Walraven, A., McKenney, S., Pieters, J., & De Vries, B. (2011). Teacher learning in collaborative curriculum design. *Teaching and teacher education, 27*(8), 1235-1244. https://doi.org/10.1016/j.tate.2011.07.003

Yorulmaz, Y. İ., & Altınkurt, Y. (2018). The examination of teacher burnout in Turkey: A meta-analysis. *Turkish Journal of Education*, *7*(1), 34–52. https://doi.org/10.19128/turje.348273

Zhang, L., Zhao, J., Zheng, H., Xiao, Y., Chen, M., Chen, D., & Xiao, H. (2014). Mental health and burnout in primary and secondary school teachers in the remote mountain areas of Guangdong Province in the People's Republic of China. *Neuropsychiatric Disease and Treatment*, *10*, 123-130. https://doi.org/10.2147/NDT.S56020

Zhang, Y., & Zhu, Y. (2022). Effects of educational robotics on the creativity and problem-solving skills of K-12 students: A meta-analysis. *Educational Studies*, *50*(6), 1539-1557. https://doi.org/10.1080/03055698.2022.2107873

Primljeno: 11.07.2025.
Korigovana verzija primljena: 14.01.2026.
Prihvaćeno za štampu: 10.02.2026.

Stanislava Marić Jurišin
Odsek za pedagogiju, Filozofski fakultet, Univerzitet u Novom Sadu, Novi Sad, Srbija
https://orcid.org/0000-0002-4184-3309

Borka Malčić
Odsek za pedagogiju, Filozofski fakultet, Univerzitet u Novom Sadu, Novi Sad, Srbija
https://orcid.org/0000-0002-1862-962X

Snežana Jokić
Tehnički fakultet, Univerzitet u Novom Sadu, Zrenjanin, Srbija
https://orcid.org/0000-0002-4756-9435

Simona Bekić
Odsek za pedagogiju, Filozofski fakultet, Univerzitet u Novom Sadu, Novi Sad, Srbija
https://orcid.org/0000-0002-0974-8846

Ovaj rad je objavljen pod licencom Creative Commons Attribution 4.0 International (CC BY 4.0). Dopušteno je da se delo kopira i distribuira u svim medijima i formatima, da se prera đuje, menja i nadograđuje u bilo koje svrhe, uključujući i komercijalne, pod uslovom da se na pravilan način citiraju njegovi prvobitni autori, postavi link ka originalnoj licenci i naznači da li je delo izmenjeno. Korisnici su pri tome dužni da navedu pun bibliografski opis članka objavljenog u ovom časopisu (autori, naslov rada, naslov časopisa, volumen, sveska, paginacija), kao i njegovu DOI oznaku, a u slučaju objavljivanja u elektronskoj formi takođe su dužni da postave i HTML link.

Studies in Teaching and Education, 2026, *75*(2), 437-455
https://doi.org/10.5937/niv75-62646

ISSN 0547-3330
eISSN 2560-3051
Original research paper

Personal and School-Related Characteristics as Predictors of Teacher Burnout in Serbia

Stanislava Marić Jurišin
Department of Pedagogy, Faculty of Philosophy,
University of Novi Sad, Novi Sad, Serbia
Borka Malčić
Department of Pedagogy, Faculty of Philosophy,
University of Novi Sad, Novi Sad, Serbia
Snežana Jokić
Technical Faculty, University of Novi Sad, Zrenjanin, Serbia
Simona Bekić[1]
Department of Pedagogy, Faculty of Philosophy,
University of Novi Sad, Novi Sad, Serbia

Abstract *Studies of teacher burnout indicate a concerningly high proportion of professionals exhibiting its symptoms worldwide. The consequences of this phenomenon go beyond the individual level, as they undermine the quality of the teaching process, reduce teachers' motivation and psychological well-being, and may negatively affect students' development. Thus, the following study aimed to examine how personal and workplace-related factors contribute to the development of teacher burnout in Serbia. A cross-sectional survey was conducted with a sample of 883 primary and secondary school teachers across Serbia, using the Maslach Burnout Inventory – Educators Survey (MBI-ES) and a set of personal and workplace-related variables. The results revealed moderately high levels of Emotional Exhaustion, low to moderate levels of Depersonalization, and high levels of Personal Accomplishment. Multiple regression analyses identified significant predictors of burnout dimensions: seniority, material status, age, school type, and field of study for Emotional Exhaustion; field of study for Personal Accomplishment; and seniority, age, and material status for Depersonalization. These findings highlight that burnout is shaped not only by individual factors but also by broader organizational and systemic conditions. The findings from this study may help create burnout prevention strategies in Serbia, as well as comparable educational contexts. Limitations and directions for future research are also discussed in this paper.*

Keywords: *teachers, teacher burnout, school environment, MBI-ES.*

1 simona.bekic@ff.uns.ac.rs

Introduction

Burnout syndrome is usually defined a state of emotional exhaustion and a reduced sense of personal accomplishment, which arises as a response to long-term stress associated with an individual's workplace (Schaufeli & Buunk, 2003). Although it has many conceptualizations, it is usually determined by three dimensions: emotional exhaustion (EE), depersonalization or detachment from one's job and people involved in it (DP) and a sense of reduced personal accomplishment (PA) (Maslach et al., 2016). Various sociological, economic, political and environmental factors have contributed to the increasing prevalence of the burnout syndrome in the 21st century. Research has shown that the causes and symptoms of burnout syndrome are similar across different professional contexts (Marek et al., 2017; Schaufeli et al., 2009), however, studies indicate that burnout is more prevalent in professions involving human services, such as health care and education (Durr et al., 2014).

In Serbia, the results so far show concerningly high levels of burnout among teachers (Marić i sar., 2024; Ranđelović i sar., 2013). Teachers are especially prone to it due to the nature of their work, which involves high emotional demands, work under pressure and often inadequate working conditions (Marić-Jurišin i Malčić, 2022; Popović i sar., 2023). The importance of examining this phenomenon is of global interest and is reflected in its numerous negative factors: health concerns, educational process disruption, interference with the mental and emotional development of children (Marić i sar., 2024; Ranđelović i sar., 2013), lowering teachers' self-efficacy, work motivation, self-esteem, self-respect, productivity and job satisfaction (Herman et al., 2018; Marek et al., 2017; Skaalvik & Skaalvik, 2014)). Numerous psychological and educational studies have dealt with teacher burnout (Buonomo et. al., 2017; Chang, 2013; Kim & Burić, 2020; Ranđelović i sar., 2013). However, few studies have explored the effect of complex interplay between individual characteristics and the work environment on teacher burnout. Thus, the goal of this research is to analyse the relationships of teachers' personal and work characteristics and the way in which they explain teacher burnout syndrome in Serbia. Findings can inform not only school-level interventions but also broader educational policy in Serbia and similar contexts.

Predictors of teacher burnout

Although people from all professions are prone to developing burnout, this condition is very common among teachers. It has been speculated that burnout affects 70% of teachers over the course of their professional lives (Piperac et al., 2021). These concerning numbers raise the question of why this occurs. The existing literature highlights the multifaceted nature of teacher burnout, which can generally be explained through personal and workplace-related predictors.

Among personal characteristics, age is often identified as an important factor, although findings remain inconsistent. Some studies suggest that burnout is more common among younger teachers (Al Asadi et al., 2018; Zhang, 2022), while others report higher

levels among older teachers (Aflakseir & Nemati, 2018; Padmanabhanunni & Pretorius, 2023; Schaufeli & Buunk, 2003). Similar inconsistencies appear when perceiving gender as a potential factor. Some studies found higher burnout among female teachers (Zhang et al., 2014), while others reported greater prevalence among male teachers (Al Asadi et al., 2018; Unterbrink et al., 2007). In Finnish research, men showed higher depersonalization, whereas women reported higher emotional exhaustion (Saloviita & Pakarinen, 2021). A meta-analysis by Yorulmaz and Altınkurt (Yorulmaz & Altınkurt, 2018) indicates that educational status is another contributing factor to teacher burnout. Teachers with higher academic degrees reported greater burnout and lower personal accomplishment (Yorulmaz & Altınkurt, 2018). Seniority has also been linked to burnout, although results differ, with some studies showing higher burnout among more experienced teachers (Yorulmaz & Altınkurt, 2018), while others report the opposite (Al Asadi et al., 2018). Lower material status has also been associated with higher burnout levels (Candeias et al., 2020). These mixed findings may partly reflect differences in cultural and educational contexts, which are often insufficiently considered in quantitative studies.

When it comes to workplace-related characteristics, studies have identified differences across educational stages. While some found no significant differences between primary and secondary school teachers (Rajendran et al., 2020), others reported that teachers working in lower educational stages were more prone to burnout across all dimensions (Kimsesiz, 2019). Differences have also been observed between school types. For example, teachers in vocational schools, such as German Hauptschulen, showed higher burnout rates than those in grammar schools, partly due to feeling less rewarded and having lower professional status (Unterbrink et al., 2007). As well as this, some authors have found opposing differences between levels of burnout between teachers' fields of study (e.g. humanities versus STEM teachers) (Agyapong et al., 2022; Saloviita & Pakarinen, 2021).

Research aim and hypothesis

The goal of this research is to determine and analyse the complex relationships of personal and workplace characteristics of teachers, as well as the way in which they explain teacher burnout syndrome in Serbia. Hypotheses were formulated based on the reviewed literature and the characteristics of the study context. The main hypothesis (H_0) reads: There is no significant relationship between personal and work characteristics with the level of burnout of teachers. The alternative main hypothesis (H_1) is that there is a significant association between personal characteristics and work context with teachers' burnout levels. The specific research hypotheses are:

H1: Teachers with longer working experience have a higher level of burnout.

H2: Teachers with a worse financial status have a higher level of burnout.

H3: Older teachers have a lower level of burnout compared to younger ones.

H4: There are differences in burnout levels between teachers at different school types.

H4.1: Teachers working in primary schools have a higher level of burnout compared to those in secondary schools.

H4.2: Teachers working in the first-cycle of primary schools have higher burnout levels compared to second-cycle primary school teachers.

H5: Teachers of social, artistic and practical subjects have a lower level of burnout compared to teachers of subjects in the field of natural sciences.

H6: The function of homeroom teacher is associated with a higher level of burnout.

H7: Gender and level of education are not significant predictors of burnout.

Methods

Study Context

The study is based in Serbia, where basic education is organized as a single eight-year structure consisting of two educational cycles: the first cycle (Grades 1 – 4), taught by classroom teachers, and the second cycle (Grades 5 – 8), based on subject teaching, with different teachers for individual subjects. Public primary education is compulsory and free of charge (Eurydice, 2025), after which students may continue into four-year general grammar schools or vocational secondary education. Initial teacher education pathways differ depending on the teaching role. Classroom teachers are educated at faculties of education through programs focused on pedagogy, didactics, and practice, usually completing a four-year Bachelor of Education followed by a one-year master's program. Subject teachers, who teach in higher primary grades and secondary schools, are educated primarily within discipline-specific faculties and later complete pedagogical, psychological, and didactical training. Since 2013, an alternative pathway has allowed graduates from non-teaching fields to obtain a master's degree in education and enter the profession (Maghnouj et al., 2020). Although all teachers are formally required to hold a master's degree, the variable "educational level" in this study reflects differences in attained academic degrees and educational trajectories rather than formal eligibility.

These differences in teacher preparation may shape distinct professional experiences, as classroom teachers are more strongly oriented toward holistic child development and long-term relationships with pupils, while subject teachers focus more on disciplinary knowledge and subject-specific instruction (Maghnouj et al., 2020). At the same time, the Serbian education system faces several structural challenges. Public investment in education has remained relatively low, around 4% of GDP, below the OECD average, with underfunding especially visible in secondary education (Maghnouj et al., 2020). The teaching workforce is aging, predominantly female, and often characterized by traditional pedagogical practices that lay behind student-centred approaches. Teacher salaries remain relatively low, while career advancement mechanisms are limited by complex promotion procedures and weak financial incentives. Professional development is mainly funded on a local level and often depends on external resources or teachers' own contributions, due to unstable central funding and limited municipal budgets (Eurydice, 2025; Maghnouj et al., 2020).

Sample

The sample structure is presented in Table 1. During the implementation of the research, the authors adhered to the provisions of the Code of Academic Integrity of the University of Novi Sad, especially Article 7, which referred to "scientific and research work with respondents" (University of Novi Sad, 2020, p. 3). Additionally, participants were informed about the ethical procedures, and they participated in the research voluntarily.

Table 1
Sample of the study (N = 883)

Variable	Level	Counts	Percent
Gender	Male	132	14.9
	Female	751	85.1
Age group	24-30	55	6.2
	31-40	183	20.7
	41-50	320	36.2
	51-60	264	29.9
	61+	61	6.9
Seniority	1-5	91	10.3
	6-15	219	24.8
	16-25	304	34.4
	25+	269	30.5
Education level	Bachelor studies	405	45.9
	Master studies	442	50.1
	Specialist studies	26	2.9
	Doctoral studies	10	1.1
Economic status	Same as the majority	588	66.6
	Worse than the majority	234	26.5
	Better than the majority	61	6.9
School setting	Urban	568	64.3
	Rural	315	35.7
School type	Primary school – first cycle	246	27.9
	Primary school – second cycle	375	42.5
	Secondary vocational school	164	18.6
	Secondary grammar school	77	8.7
	Secondary art school	21	2.4

Instruments

The first part of the instrument included questions about respondents' personal characteristics and work context, such as gender, age, seniority (number of years spent teaching), education level (having completed bachelor, master, specialist or doctoral studies), school setting (urban/rural), school type, field of study (subject area), homeroom teacher status, material status, and participation in professional development activities. In Serbia, educational professionals are legally entitled and required to engage annually in diverse forms of professional development (Ministarstvo prosvete, nauke i tehnološkog razvoja, 2021). In the survey, participation in professional development activities was operationalized through self-reported frequency on an annual basis (ranging from no participation to frequent participation). The second part of the instrument consisted of the Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach & Jackson, 1981), which assesses teacher burnout. The MBI-ES contains 22 items measuring three dimensions of burnout (emotional exhaustion – EE, personal accomplishment – PA, and depersonalization – DP), rated on a 7-point Likert scale (0 = never to 6 = every day). The scale demonstrated good internal consistency in this study, with Cronbach's alpha coefficients above .70 for all subscales.

Procedure and data analysis plan

The study employed a cross-sectional, survey-based design, using a convenience sampling approach. The data were collected during June and July 2024, via an online questionnaire administered through Google Forms. The survey link was distributed through official school email lists and professional networks on social media. Participation was voluntary and anonymous, and all participants provided informed consent prior to completing the questionnaire. Only fully completed responses were included in the analysis.

Descriptive statistics were calculated for all study variables. Pearson's correlation coefficients were computed to examine associations between burnout subscales and socio-demographic and workplace-related variables. Multiple linear regression analyses were conducted to identify predictors of each of the three burnout dimensions. Assumptions of normality, linearity, homoscedasticity, and absence of multicollinearity were checked prior to regression analyses. In order to examine differences between primary school teachers of the first cycle (class teachers) and teachers of the second cycle (subject teachers), additional analyses were conducted on a subsample of teachers employed in primary schools using the *t*-test and chi-square test of independence. All statistical analyses were performed using IBM SPSS Statistics 26.

Results

Descriptive statistics

Based on the classification of results from the MBI manual (Maslach et al., 2016), our descriptive statistics (Table 2) indicate moderately high levels of EE, low to moderate levels of DP, and high levels of PA.

Table 2
Descriptive Statistics of Teacher Burnout Subscales (N=883)

Subscale	Range	*M*	*SD*	Variance
Emotional exhaustion	0-60	3.29	1.82	3.31
Personal accomplishment	8-39	4.41	1.36	1.88
Depersonalization	0-22	1.43	1.56	2.50

Note. N stands for number of participants, *M* stands for mean; *SD* stands for standard deviation

Approximately 60% of teachers in the sample reported experiencing chronic EE. The variability of scores indicates that, although the average EE levels are moderately high, there is a substantial subgroup of teachers experiencing very high levels of exhaustion. Participants reported, on average, low levels of DP. However, a concerning trend was observed in item DP11 – "I worry that this job is hardening me emotionally" ($M = 3.29$), suggesting that some teachers are concerned about becoming emotionally detached from their work and students. The observed variability indicates that certain subgroups may be at higher risk, and warrant further attention and targeted support. Regarding PA, teachers reported consistently high levels, indicating a strong sense of professional competence and achievement. High PA scores suggest that, despite the presence of EE in the sample, a significant protective factor exists in the form of high professional efficacy and personal fulfilment.

Associations Between Socio-demographic and Work-Related Characteristics and Burnout Dimensions

Pearson's correlation coefficients were calculated to examine associations between socio-demographic and workplace-related variables (Items 1–10) and the three subscales of burnout measured by the MBI-ES (Table 3). The aim of this analysis was to identify potential risk and protective factors for teacher burnout, as well as to highlight teacher subgroups potentially more vulnerable to burnout. The burnout subscales were significantly interrelated in the expected theoretical directions, consistent with the multidimensional structure of burnout proposed in the literature (Maslach et al., 2016).

A significant negative correlation was found between material status, school type, seniority, age and gender with EE. No significant correlations were observed between EE and field of study or homeroom teacher status. Regarding DP, correlations were found with homeroom teacher status, participation in professional development, and material status. No significant associations were found between DP and age, gender, seniority, education level, or field of study. The subscale PA was shown to be correlated with homeroom teacher status, field of study, and school type. No significant correlations of PA were found with gender, age, seniority, material status or education level of teachers.

Table 3
Correlations of socio-demographic and work-related characteristics and teacher burnout subscales

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Gender	1												
2. Age	.088**	1											
3. Seniority	.115**	.832**	1										
4. Education level	-.067*	-.242**	-.226**	1									
5. Material status	-.022	-.115**	-.066*	.098**	1								
6. School setting	-.013	.063	.058	-.056	-.007	1							
7. Professional development	.019	.009	-.013	-.041	-.007	-.015	1						
8. School type	-.182**	-.063	-.088**	.131**	.080*	.076*	.019	1					
9. Homeroom teacher status	.173**	.099**	.147**	-.088**	-.046	.023	.000	-.654**	1				
10. Field of study	.061	.088*	.100**	-.023	-.026	.063	.034	-.473**	.920**	1			
11. EE	.073*	.061	.135**	-.043	-.196**	.025	-.018	-.069*	.007	-.041	1		
12. PA	.020	.018	.039	-.003	.029	.008	.026	-.118**	.189**	.148**	-.326**	1	
13. DP	-.014	-.014	.035	.016	-.087**	.014	-.066*	.031	-.074*	-.046	.606**	-.459**	1

Note. ** - Correlation is significant at the .01 level, * - Correlation is significant at the .05 level,
EE – emotional exhaustion, *PA* – personal accomplishment, *DP* – depersonalization.

Multiple linear regression

To examine how gender, age, seniority, education level, material status, school setting, school type, homeroom teacher status, professional development programs, and teachers' field of study predict teacher burnout, a multiple linear regression analysis was conducted.

Emotional exhaustion

An analysis of variance indicated that the overall regression model predicting EE was statistically significant, $F(10, 721) = 6.86$, $p < .001$ (see Table 4). The predictors jointly explained approximately 8.7% of the variance in EE ($R^2 = .09$, Adjusted $R^2 = .07$), which, although modest, is meaningful when investigating complex psychological constructs such as burnout. The standard error of the estimate was 12.40.

Table 4
ANOVA Summary for the Regression Model Predicting Emotional Exhaustion

Model		*SS*	*df*	*MS*	*F*	*Sig.*
1	Regression	10545.60	10	1054.56	6.86	.000
	Residual	110826.31	721	153.71		
	Total	121371.92	731			

Note. *SS* stands for Sum of Squares, df stands for degrees of freedom, *MS* stands for Mean Square, *F* stands for *F*-ratio, *Sig*. stands for *p*-value

The regression analysis (Table 5) revealed several significant predictors of EE. Seniority emerged as the strongest positive predictor and an increase in seniority raised EE scores by nearly 4 points on average. Age had a significant negative association with EE, lowering EE scores by an average of 2.4 points. Field of study also significantly predicted EE, with teachers of social, practical, and art subjects reporting lower EE compared to those teaching science-related subjects. Material status was negatively associated with EE indicating that teachers with better financial status experienced lower EE. School type was a significant predictor, with teachers in high schools reporting lower EE compared to their peers in primary schools. Additionally, homeroom teacher status showed a borderline significant effect, suggesting a possible trend toward elevated EE among homeroom teachers. However, this finding did not reach conventional significance levels and requires further investigation. Variables such as gender, school setting, education level, and participation in professional development programs did not significantly predict EE in this model.

Table 5
Regression Coefficients Predicting Emotional Exhaustion

Predictor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Constant)	34.45	4.17	—	8.27	.00
Gender	.96	1.26	.03	.76	.45
Age	-2.43	.81	-.19	-2.98	.00
Seniority	3.99	.85	.30	4.71	.00
Education level	.34	.78	.02	.44	.66
Material status	-4.43	.87	-.18	-5.07	.00
School setting	1.20	.98	.04	1.22	.22
Professional development	-.01	.56	-.00	-.02	.98
School type	-1.24	.50	-.10	-2.50	.01
Homeroom teacher status	.91	.47	.18	1.92	.05
Field of study	-1.40	.47	-.28	-3.01	.00

Note. *B* stands for Unstandardized Coefficient, *SE B* stands for Standard Error for *B*, *β* stands for Standardized Coefficient, *t* stands for *t*-statistic, *p* stands for *p*-value

Personal accomplishment

An analysis of variance indicated that the overall regression model predicting PA was statistically significant, $F(10, 721) = 2.44$, $p = .007$ (see Table 6). The predictors jointly explained approximately 3.3% of the variance in PA ($R^2 = .03$, Adjusted $R^2 = .02$). Although modest, this result is relevant when investigating complex human behaviours such as burnout. The standard error of the estimate was 6.96.

Table 6
ANOVA Summary for the Regression Model Predicting Personal accomplishment

Model		*SS*	*df*	*MS*	*F*	*Sig.*
1	Regression	1181.49	10	118.15	2.44	.007
	Residual	34917.03	721	48.43		
	Total	36098.52	731			

Note. SS stands for Sum of Squares, *df* stands for degrees of freedom, *MS* stands for Mean Square, *F* stands for *F*-ratio, *Sig*. stands for *p*-value

The regression analysis (Table 7) revealed that field of study was the strongest positive predictor of PA, indicating that teachers of social studies, arts, and practical subjects reported significantly higher levels of PA compared to science teachers. Homeroom teacher status showed a marginally significant negative association with PA, suggesting a possible trend toward slightly lower PA among homeroom teachers, though this did not reach conventional significance thresholds. Similarly, material status showed a marginal positive association with PA, implying that teachers with better financial status may experience slightly higher levels of PA. Other variables – school type, seniority, age, gender, school setting, education level, and participation in professional development – did not significantly predict levels of PA in this model.

Table 7
Regression Coefficients Predicting Personal Accomplishment

Predictor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Constant)	30.63	2.34	—	13.09	.00
Gender	.52	.71	.030	.74	.46
Age	-.06	.46	-.01	-.13	.89
Seniority	-.15	.48	-.02	-.32	.75
Education level	.20	.44	.02	.47	.64
Material status	.81	.49	.06	1.66	.09
School setting	.09	.55	.01	.16	.87
Professional development	.18	.32	.02	.57	.57
School type	.07	.28	.01	.25	.80
Homeroom teacher status	-.44	.26	-.16	-1.68	.09
Field of study	.84	.26	.30	3.19	.00

Note. B stands for Unstandardized Coefficient, *SE B* stands for Standard Error for *B*, *β* stands for Standardized Coefficient, *t* stands for *t*-statistic, *p* stands for *p*-value

Depersonalization

An analysis of variance indicated that the overall regression model predicting DP was statistically significant, $F(10.721) = 2.09$, $p = .02$ (see Table 8). The model explained approximately 2.8% of the variance in DP ($R^2 = .03$, Adjusted $R^2 = .01$). Although this is a small proportion of explained variance, the findings may still help identify risk groups rather than provide precise predictions of individual DP levels. The standard error of the estimate was 4.97.

Table 8
ANOVA Summary for the Regression Model Predicting Depersonalization

Model		*SS*	*df*	*MS*	*F*	*Sig.*
	Regression	515.180	10	51.518	2.09	.02
1	Residual	17808.683	721	24.700		
	Total	18323.863	731			

Note. *SS* stands for Sum of Squares, *df* stands for degrees of freedom, *MS* stands for Mean Square, *F* stands for *F*-ratio, Sig. stands for *p*-value

The regression analysis (Table 9) identified three significant predictors of DP. Seniority was the strongest positive predictor, indicating that teachers with more years of experience were more likely to report higher levels of DP. Age had a significant negative association with DP, which means that older teachers were less prone to DP. Material status also emerged as a significant negative predictor, suggesting that teachers with better financial standing reported lower DP levels. Other variables – gender, school setting, education level, professional development, school type, homeroom teacher status, and field of study – did not significantly predict DP in this model.

Table 9
Regression Coefficients Predicting Depersonalization

Predictor	*B* (Unstandardized)	*SE B*	*β*	*t*	*p*
(Constant)	9.95	1.67	—	5.96	.00
Gender	-.43	.51	-.03	-.85	.39
Age	-.80	.33	-.16	-2.45	.01
Seniority	1.07	.34	.20	3.16	.00
Education level	.16	.31	.02	.51	.61
Material status	-.79	.35	-.08	-2.26	.02
School setting	.20	.39	.02	.51	.61
Professional development	-.31	.23	-.05	-1.39	.16
School type	-.16	.20	-.03	-.80	.42
Homeroom teacher status	.17	.19	.09	.91	.36
Field of study	-.29	.19	-.15	-1.56	.12

Note. *B* stands for Unstandardized Coefficient, *SE B* stands for Standard Error for *B*, *β* stands for Standardized Coefficient, *t* stands for *t*-statistic, *p* stands for *p*-value

Differences Between First- and Second-Cycle Primary School Teachers

To examine differences between primary school teachers of the first cycle and the second cycle, additional analyses were conducted on a subsample of teachers employed in primary schools. After data filtering (school type = 1 or 2), a grouping variable was created, distinguishing first from second cycle teachers. The distributions of EE, DP, and PA scores were assessed using descriptive indicators of skewness and kurtosis and were evaluated as approximately normal, which justified the use of parametric tests. Differences between the groups in age and dimensions of professional burnout were examined using independent-samples *t*-tests. Prior to each analysis, homogeneity of variances was assessed using Levene's test; in cases where no significant variance differences were detected, the standard version of the t-test was applied. Differences in educational attainment between the groups were analyzed using the chi-square test of independence.

Demographic Differences Between Teacher Groups

The analysis first examined differences in basic demographic characteristics of teachers, specifically age. The results of the independent-samples t-test indicated a statistically significant difference in age between first-cycle and second-cycle teachers. On average, first-cycle teachers were older ($M = 3.26$, $SD = 0.99$) than second-cycle teachers ($M = 3.01$, $SD = 0.99$), $t(524.90) = 3.13$, $p = .002$.

The chi-square test of independence did not indicate a statistically significant association between teachers' role and level of education, $\chi^2(3) = 1.16$, $p = .762$. Both groups exhibited a similar educational structure, with the majority of teachers in each group having completed undergraduate or master's studies.

Table 10
The Structure of the Level of Education of First-Cycle Teachers and Second-Cycle Teachers in Primary Schools

Education level	First-Cycle Teachers %	Second-Cycle Teachers %	Sum %
Bachelor	52.4	48.3	49.9
Master	44.7	48.8	47.2
Specialist studies	2.0	1.9	1.9
PhD	0.8	1.1	1.0
Sum	100.0	100.0	100.0

Differences of Burnout Levels Between Teacher Groups

The independent-samples *t*-test did not indicate a statistically significant difference in levels of EE between first-cycle teachers and second-cycle teachers. Although second-cycle teachers reported a slightly higher mean level of EE ($M = 3.43$, $SD = 1.39$) compared to first-cycle teachers ($M = 3.33$, $SD = 1.39$), this difference was not statistically significant, $t(619) = -0.86$, $p = .388$. The results of the t-test revealed a statistically significant difference in levels of PA between the two teacher groups. First-cycle teachers

reported higher mean levels of PA ($M = 4.69$, $SD = 0.83$) compared to second-cycle teachers ($M = 4.28$, $SD = 0.85$), $t(619) = 5.85$, $p < .001$. A statistically significant difference was also observed in levels of DP between first-cycle teachers and second-cycle teachers. Second-cycle teachers exhibited higher levels of DP ($M = 1.53$, $SD = 0.96$) than first-cycle teachers ($M = 1.32$, $SD = 1.00$), $t(619) = -2.65$, $p = .008$.

Discussion

The aim of this study was to explore the relationships between personal and workplace-related factors and their contribution to teacher burnout in Serbia. The results demonstrated significant associations between these factors and burnout levels, rejecting the null hypothesis. Teachers simultaneously reported high levels of personal accomplishment alongside elevated EE and DP. This paradox may reflect the distinction between perceived professional value and the emotional costs of work: teachers may experience their work as meaningful and professionally fulfilling, while also carrying a substantial emotional burden that contributes to exhaustion and emotional distancing. This pattern aligns with contemporary conceptualizations of burnout as a complex and dynamic process, in which its core dimensions may develop relatively independently (Leiter et al., 2023; Saloviita & Pakarinen, 2021).

Hypothesis 1, that teachers with longer working experience have higher burnout levels, was confirmed. Seniority was strongly associated with higher EE and DP, suggesting that cumulative exposure to workplace stressors contributes to burnout in time. This is consistent with previous findings which show that teachers with more than 11 years of experience report higher burnout, especially EE (Yorulmaz & Altınkurt, 2018). At the same time, seniority positively predicted DP, while age functioned as a negative predictor. Although these variables are usually closely related, this finding suggests that DP may be shaped more by prolonged professional strain than by age itself. This supports the models that emphasize the role of job demands and resources in burnout development (Bakker & de Vries, 2021; Hakanen et al., 2006). Hypothesis 2 was also supported, as lower material status was linked to greater emotional exhaustion and DP, while better financial conditions appeared protective, which was in line with previous research (Candeias et al., 2020). Hypothesis 3 was confirmed as well: older teachers showed lower levels of EE and DP, which may reflect stronger coping mechanisms and more realistic professional expectations, consistent with findings that younger teachers are more vulnerable to burnout (Al Asadi et al., 2018; Zhang, 2022).

Hypothesis 4, concerning burnout levels of teachers from different school types, was partially supported. Teachers in secondary education reported significantly lower EE than those in primary schools, supporting the previous findings that primary school teachers often work in more emotionally demanding environments with less autonomy (Kimsesiz, 2019). Additional analyses comparing first- and second-cycle primary school teachers showed no significant differences in EE, but revealed differences in other burnout dimensions. First-cycle teachers reported higher PA, likely due to stronger and more continuous relationships with students, greater visibility of pedagogical impact, and more frequent

experiences of immediate work outcomes, all recognized as protective factors against burnout (Saloviita & Pakarinen, 2021; Skaalvik & Skaalvik, 2018). In contrast, second-cycle teachers showed higher DP, possibly because of larger numbers of students, fragmented relationships, and stronger evaluation pressures, which may encourage emotional distancing as a coping strategy (Leiter et al., 2023). This pattern supports the view of burnout as a multidimensional phenomenon shaped by systemic and organizational factors, including work organization and access to support (Bakker & de Vries, 2021; Hakanen et al., 2006).

Hypothesis 5 was confirmed, as teachers of social, artistic, and practical subjects reported lower EE and higher PA than teachers of natural sciences. This is consistent with previous studies showing higher burnout among STEM teachers due to heavier workloads, stronger pressure related to student achievement, technology integration, and increased professional demands (Agyapong et al., 2022; Magtalas & Eduvala, 2024; Saloviita & Pakarinen, 2021; Tu et al., 2025). These findings support the assumption that STEM teachers may face an elevated burnout risk due to cumulative technical and curricular demands.

Hypothesis 6, regarding the function of homeroom teacher, was partially confirmed. Homeroom teacher status showed a borderline significant tendency toward higher EE and lower PA, although the effect did not reach full statistical significance across all burnout dimensions. This role often includes additional administrative, organizational, and emotional responsibilities beyond teaching itself, such as intensive communication with parents, documentation, and student support. Previous studies consistently show that emotional demands and administrative workload contribute to EE and DP, supporting the assumption that homeroom teachers may face greater burnout risk (Hakanen et al., 2006; Leiter et al., 2023; Skaalvik & Skaalvik, 2018).

Finally, Hypothesis 7 was confirmed, as gender and level of education were not significant predictors of burnout. Although burnout is often reported more frequently among women, gender differences are frequently shaped by broader organizational roles, access to autonomy, and career position rather than gender itself (Schaufeli & Buunk, 2003). Research on teachers remains inconsistent, and some studies report no significant gender differences, such as among Finnish primary school teachers (Saloviita & Pakarinen, 2021). Regarding educational level, the present findings differ from earlier studies suggesting that teachers with higher academic degrees may report higher burnout (Yorulmaz & Altınkurt, 2018), indicating that this factor requires further investigation.

Conclusion

This study examined the relationship between personal and work-related characteristics and teacher burnout within the Serbian educational context. The findings suggest that burnout is not uniformly distributed among teachers, but is shaped by a combination of individual characteristics and workplace conditions. Certain factors emerged as more strongly related to emotional exhaustion and depersonalization, while others appeared to function as protective elements, particularly in relation to personal accomplishment. These results underscore the importance of addressing teacher burnout through systemic and context-sensitive approaches rather than focusing solely on individual resilience.

Understanding the connection between specific work and personal characteristics and burnout may contribute to the development of more targeted preventive strategies within the educational system.

Limitations

Several limitations of this study should be acknowledged. First, its cross-sectional design does not allow causal conclusions about the relationships between personal/workplace-related characteristics and burnout dimensions, so longitudinal studies are needed to clarify the direction of these associations over time. Second, the explained variance in burnout outcomes was modest, suggesting that other unmeasured factors may play an important role. Psychological variables such as self-efficacy, coping style, and perceived social support were not directly assessed and should be included in future research. Cultural characteristics specific to Serbian educational context may also limit the generalizability of these findings, making cross-national comparative studies particularly valuable. In addition, professional development was measured only through frequency of participation, without considering its type, intensity, or whether it was voluntary or mandatory, which should be examined more precisely in future studies.

It should also be noted that, although the instruments used were psychometrically validated, they do not fully capture important features of the contemporary school context, such as administrative workload, pressures related to external evaluations, and rapid curricular changes. These factors may represent major sources of teacher burnout and may partly explain the relatively low correlations and limited explained variance found in this study (Salovita & Pakarinen, 2021; Skaalvik & Skaalvik, 2018). Therefore, while the study contributes to understanding individual correlates of burnout, it does not provide a comprehensive explanation of the phenomenon, since key organizational and systemic factors were not directly assessed. Only broader school-level characteristics, such as school type, field of study, and school setting, were included in the analysis as contextual indicators.

Recommendations

Within this framework, the present study offers several practice-oriented implications for the Serbian educational context. The finding that teachers report both high EE and high PA suggests that burnout prevention should not focus only on strengthening motivation or professional meaning, but also on helping teachers establish sustainable emotional boundaries in everyday practice. Future research should therefore examine the specific sources of EE more closely, as identifying these mechanisms could support more targeted interventions and reduce overall burnout levels. The finding that professional seniority, but not chronological age, predicts burnout highlights the importance of cumulative exposure to workplace stressors, particularly in systems where individuals may enter teaching later in life. This points to the value of collective support formats, such as peer mentoring, communities of practice, and group-based counselling aimed at mitigating long-term professional strain (Farber, 2000; Ly & Hong, 2025).

The association between lower material status and higher burnout further emphasizes the importance of structural economic conditions, suggesting that improving teachers' financial security may be a meaningful strategy for prevention. Differences between first-cycle and second-cycle teachers, especially higher PA and lower DP among first-cycle teachers, deserve further attention, as these teachers may represent useful models of adaptive practice. Higher burnout among STEM teachers may reflect increasing curricular and technological demands, indicating the need for targeted professional development, stronger staffing support, and collaborative curriculum planning (Voogt et al., 2011). Finally, the role of the class teacher remains an underexplored yet potentially critical factor in understanding teacher burnout, highlighting the need for future research and for considering enhanced institutional support for this role. More broadly, burnout should be understood as the result of interactions between individual and contextual factors rather than solely as an individual coping problem (Bakker & de Vries, 2021; Hakanen et al., 2006). Preventive efforts should therefore include not only individual-level interventions, but also organizational changes such as reducing administrative burden, smaller class sizes, formal mentoring systems, and stronger school leadership support (Leiter et al., 2023). The limited assessment of such structural factors in thisstudy further highlights the need for future research focused on institutional support mechanisms and systemic conditions shaping teacher burnout.

Data availability

Data will be made available on request.

Declaration of generative AI in scientific writing

An AI-based tool was used during the preparation of this paper for stylistic editing and language enhancement of the English text, without affecting the content or scientific conclusions.

References

Aflakseir, A., & Nemati, O. (2018). Association Between Work—Related Stress and Burnout Among a Group of the Elementary and High School Teachers in Zarrin—Dasht—Fars. *International Journal of School Health*, *5*(2), 1-4. https://doi.org/10.5812/intjsh.64096

Agyapong, B., Obuobi-Donkor, G., Burback, L., & Wei, Y. (2022). Stress, Burnout, Anxiety and Depression among Teachers: A Scoping Review. *International Journal of Environmental Research and Public Health*, *19*(17), 10706. https://doi.org/10.3390/ijerph191710706

Al Asadi, J., Khalaf, S., Al Waaly, A., Abed, A., & Shami, S. (2018). Burnout among primary school teachers in Iraq: Prevalence and risk factors. *Eastern Mediterranean Health Journal*, *24*(3), 262–268. https://doi.org/10.26719/2018.24.3.262

Bakker, A. B., & de Vries, J. D. (2021). Job demands–resources theory and self-regulation: New explanations and remedies for job burnout. *Anxiety, Stress, & Coping, 34*(1), 1–21. https://doi.org/10.1080/10615806.2020.1797695

Buonomo, I., Fatigante, M., & Fiorilli, C. (2017). Teachers' Burnout Profile: Risk and Protective Factors. *The Open Psychology Journal*, *10*(1), 190–201. https://doi.org/10.2174/1874350101710010190

Candeias, A., Galindo, E., Calisto, I., Borralho, L., & Reschke, K. (2020). Stress and burnout in teaching. Study in an inclusive school workplace. *Health Psychology Report*, *9*(1), 63–75. https://doi.org/10.5114/hpr.2020.100786

Chang, M. L. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehaviour: Appraisal, regulation and coping. *Motivation and Emotion, 37*(4), 799-817. https://doi.org/10.1007/s11031-012-9335-0

Durr, T., Chang, M.L., & Carson, R. L. (2014). Curbing teacher burnout: the transactional factors of teacher efficacy and emotion management. In P. W. Richardson, S. A. Karabenick, & H. M. G. Watt (Eds.), *Teacher motivation: Theory and practice* (pp. 198-213). Routledge.

Eurydice. (2025). *Serbia overview.* European Education and Culture Executive Agency. https://eurydice.eacea.ec.europa.eu/eurypedia/serbia/overview

Farber, B. A. (2000). Treatment strategies for different types of teacher burnout. *Journal of Clinical psychology, 56*(5), 675-689. https://doi.org/10.1002/(SICI)1097-4679(200005)56:5%3C675::AID-JCLP8%3E3.0.CO;2-D

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495 -513. https://doi.org/10.1016/j.jsp.2005.11.001

Herman, K. C., Hickmon-Rosa, J. E., & Reinke, W. M. (2018). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions, 20*(2), 90–100. https://doi.org/10.1177/1098300717732066.

Kim, L. E., & Burić, I. (2020). Teacher self-efficacy and burnout: Determining the directions of prediction through an autoregressive cross-lagged panel model. *Journal of Educational Psychology*, *112*(8), 1661–1676. https://doi.org/10.1037/edu0000424

Kimsesiz, F. (2019). The effect of school type on EFL teachers' burnout: The case in Turkey. *Dil ve Dilbilimi Çalışmaları Dergisi*, *15*(4), 1413–1425. https://doi.org/10.17263/jlls.668533

Leiter, M. P., Maslach, C., & Schaufeli, W. B. (2023). Burnout at work: A psychological perspective. *Current Directions in Psychological Science, 32*(1), 3–9. https://doi.org/10.4324/978131589416

Ly, N. T., & Hong, N. V. (2025). Effects of professional learning communities on job satisfaction of female teachers in Vietnam. *International Journal of Evaluation and Research in Education, 14*(1), 85-93. http://doi.org/10.11591/ijere.v14i1.30232

Maghnouj, S., Bethell, G., Guthrie, C., Kitchen, H., & Salinas, D. (2020). *OECD reviews of evaluation and assessment in education: Serbia*. OECD Publishing. https://doi.org/10.1787/225350d9-en

Magtalas, S. A., & Eduvala, J. C. (2024). Teacher's workload in relation to burnout and work performance. *International Journal of Multidisciplinary: Applied Business and Education Research, 5*(10), 4111–4123. https://doi.org/10.11594/ijmaber.05.10.24

Marek, T., Schaufeli, W. B., & Maslach, C. (2017). *Professional burnout: Recent developments in theory and research.* Routledge.

Marić Jurišin, S. i Malčić, B. (2022). *Samoprocena nastavničke profesije u savremenom obrazovnom kontekstu.* Filozofski fakultet Univerziteta u Novom Sadu.

Marić, N., Maksimović, N., i Bulat, P. (2024). Sindrom sagorevanja na radu kod prosvetnih radnika. *Medicinski podmladak, 71*(2), 258-268.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, *2*(2), 99–113. https://doi.org/10.1002/job.4030020205

Maslach, C., Jackson, S. E., & Leiter, M. P. (2016). *Maslach Burnout Inventory Manual* (Fourth Edition). Mind Garden.

Pravilnik o stalnom stručnom usavršavanju i napredovanju u zvanja nastavnika, vaspitača i stručnih saradnika (2021). Prosvetni glasnik, Službeni glasnik RS, br.109/2021.

Padmanabhanunni, A., & Pretorius, T. B. (2023). Teacher Burnout in the Time of COVID-19: Antecedents and Psychological Consequences. *International Journal of Environmental Research and Public Health*, *20*(5), 4204. https://doi.org/10.3390/ijerph20054204

Piperac, P., Todorovic, J., Terzic-Supic, Z., Maksimovic, A., Karic, S., Pilipovic, F., & Soldatovic, I. (2021). The Validity and Reliability of the Copenhagen Burnout Inventory for Examination of Burnout among Preschool Teachers in Serbia. *International Journal of Environmental Research and Public Health*, *18*(13), 6805. https://doi.org/10.3390/ijerph18136805

Popović, D., Minić, V. i Antonijević, R. (2023). Kontekstualni okvir i prevencija sindroma sagorevanja profesionalaca u vaspitno-obrazovnim ustanovama. *Nastava i vaspitanje, 72*(1), 59-72. https://doi.org/10.5937/nasvas2301059P

Rajendran, N., Watt, H. M. G., & Richardson, P. W. (2020). Teacher burnout and turnover intent. *The Australian Educational Researcher*, *47*(3), 477–500. https://doi.org/10.1007/s13384-019-00371-x

Ranđelović, K., Stojiljković, S., i Milojević, M. (2013). Personalni faktori sindroma izgaranja kod nastavnika u okviru teorije samoodređenja. *Zbornik Instituta za pedagoška istraživanja*, *45*(2), 260-281. http://doi.org/10.11591/ijere.v14i1.30232

Saloviita, T., & Pakarinen, E. (2021). Teacher burnout explained: Teacher-, student-, and organisation-level variables. *Teaching and Teacher Education*, *97*, 103221. https://doi.org/10.1016/j.tate.2020.103221

Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An Overview of 25 Years of Research and Theorizing. In M.J. Schabracq, J.A.M. Winnubst, & C.L. Cooper (Eds.), *The Handbook of Work & Health Psychology* (pp. 383–425). John Wiley & Sons. https://doi.org/10.1002/0470013400.ch19

Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International, 14*(3), 204–220. https://doi.org/10.1108/13620430910966406

Skaalvik, E. M., & Skaalvik, S. (2018). Job demands and job resources as predictors of teacher motivation and well-being. *Social Psychology of Education*, *21*, 1251–1275. https://doi.org/10.1007/s11218-018-9464-8

Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *Psychological Reports, 114*(1), 68–77. https://doi.org/10.2466/14.02.PR0.114k14w0

Tu, L., Rao, Z., Jiang, H., & Dai, L. (2025). Technostress, burnout, and job satisfaction: An empirical study of STEM teachers' well-being and performance. *Behavioral Sciences, 15*(7), 992. https://doi.org/10.3390/bs15070992

Univerzitet u Novom Sadu. (2020). *Kodeks o akademskom integritetu* (prečišćen tekst). https://www.uns.ac.rs/index.php/univerzitet/javnost-rada/dokumenti/aktiuns/send/35-pravilnici/321-kodeks-o-akademskom-integritetu

Unterbrink, T., Hack, A., Pfeifer, R., Buhl-Grießhaber, V., Müller, U., Wesche, H., Frommhold, M., Scheuch, K., Seibt, R., Wirsching, M., & Bauer, J. (2007). Burnout and effort–reward-imbalance in a sample of 949 German teachers. *International Archives of Occupational and Environmental Health*, *80*(5), 433–441. https://doi.org/10.1007/s00420-007-0169-0

Voogt, J., Westbroek, H., Handelzalts, A., Walraven, A., McKenney, S., Pieters, J., & De Vries, B. (2011). Teacher learning in collaborative curriculum design. *Teaching and teacher education, 27*(8), 1235-1244. https://doi.org/10.1016/j.tate.2011.07.003

Yorulmaz, Y. İ., & Altınkurt, Y. (2018). The examination of teacher burnout in Turkey: A meta-analysis. *Turkish Journal of Education*, *7*(1), 34–52. https://doi.org/10.19128/turje.348273

Zhang, L., Zhao, J., Zheng, H., Xiao, Y., Chen, M., Chen, D., & Xiao, H. (2014). Mental health and burnout in primary and secondary school teachers in the remote mountain areas of Guangdong Province in the People's Republic of China. *Neuropsychiatric Disease and Treatment*, *10*, 123-130. https://doi.org/10.2147/NDT.S56020

Zhang, Y., & Zhu, Y. (2022). Effects of educational robotics on the creativity and problem-solving skills of K-12 students: A meta-analysis. *Educational Studies*, *50*(6), 1539-1557. https://doi.org/10.1080/03055698.2022.2107873

Article received: 11.07.2025.
Updated version received: 14.01.2026.
Accepted for publishing: 10.02.2026.

Stanislava Marić Jurišin
Department of Pedagogy, Faculty of Philosophy, University of Novi Sad, Novi Sad, Serbia
https://orcid.org/0000-0002-4184-3309

Borka Malčić
Department of Pedagogy, Faculty of Philosophy, University of Novi Sad, Novi Sad, Serbia
https://orcid.org/0000-0002-1862-962X

Snežana Jokić
Technical Faculty, University of Novi Sad, Zrenjanin, Serbia
https://orcid.org/0000-0002-4756-9435

Simona Bekić
Department of Pedagogy, Faculty of Philosophy, University of Novi Sad, Novi Sad, Serbia
https://orcid.org/0000-0002-0974-8846

This work is published under the Creative Commons Attribution 4.0 International (CC BY 4.0). It is permitted to copy and distribute the work in all media and formats, to remix, transform, and build upon it for any purpose, including commercial purposes, provided that the original authors are properly credited, a link to the original license is included and it is indicated whether the work has been modified. Users are required to provide a full bibliographic citation of the article published in this journal (authors, title of the work, journal title, volume, issue, pagination), as well as its DOI identifier, and in the case of electronic publication, they are also required to provide an HTML link.