

## Zastupljenost profesionalnog stresa i sindroma sagorevanja na poslu kod lekara opšte medicine

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## Incidence of professional stress and burnout syndrome in general physicians

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### Sažetak

**Uvod.** Profesionalni stres i sindrom sagorevanja su visokorasprostranjeni u lekarskoj profesiji.

**Cilj rada.** Ispitati zastupljenost profesionalnog stresa kod lekara opšte medicine i rizik obolevanja od sindroma sagorevanja.

**Metod.** Studija preseka sprovedena 30.-31.03.2019. godine u Beogradu i 17.-18.05.2019. godine u Bačkoj Palanci. Upitnik je imao tri dela: sociodemografske karakteristike ispitanika; Freudenbergova skala sagorevanja i Upitnik o stresorima radnog mesta. Dobijeni podaci su statistički obrađeni softverskim paketom SPSS 20. Statistička značajnost je definisana za nivo  $p < 0,05$ .

**Rezultati.** Ispitivanjem je obuhvaćeno 455 lekara, 84,8% žena; 49,2% lekara su specijalisti opšte medicine, a 79,8% lekara je radilo u gradu. Mnogi lekari su bili stariji od 55 godina (31,9%), i najviše sa radnim stažom od 21 do 30 godina (30,1%). Prosečna dužina radnog staža iznosila je  $19,46 \pm 11,04$  godine. Umeren nivo stresa je imalo 44,6% ispitivanih lekara, 43,3% visok, a prevalencija stresa iznosila je 93,6%, češći je kod žena ( $p=0,038$ ) i kod specijalista opšte medicine ( $p=0,042$ ). Najčešći stresori: preopterećenost poslom, administrativni poslovi i nedovoljno vreme za preglede. Prema Freudenbergovoj skali, 43,1% lekara su bili kandidati, a 8,8% zahvaćeni sindromom sagorevanja. Lekari starosti  $\leq 35$  godina i oni sa radnim stažom  $\leq 10$  godina, češće su bez rizika za sindrom sagorevanja ( $p=0,000$ ), a specijalisti opšte medicine češće su kandidati za sindrom sagorevanja. Sa porastom nivoa stresa raste i izraženost sindroma sagorevanja.

**Zaključak.** Profesionalni stres je visoko zastupljen kod lekara opšte medicine, sa njegovim porastom raste i izraženost sindroma sagorevanja.

**Ključne reči.** profesionalni stres, sindrom sagorevanja na poslu, opšta medicina

### Abstract

**Introduction:** Professional stress and burnout syndrome are widely spread among health professionals.

**Objective:** Examine the incidence of professional stress in general physicians (GPs) and the risk of burnout syndrome.

**Method:** A cross-sectional study was performed from 30.-31.03.2019, in Belgrade and 17.-18.05.2019, in Backa Palanka. The questionnaire had three sections: participants' sociodemographic data, Freudenberg burnout scale, and a section about workplace stressors. Acquired data were statistically processed with the SPSS20 package. Statistical significance was defined for  $p < 0.05$  level.

**Results:** The research included 455 GPs, of whom 84.8% were women; 49.2% were specialists in general practice, and 79.8% worked in the city area. The majority of GPs were over 55 years of age (31.9%), and 21-30 years of service (30.1%). The average length of service was  $19.46 \pm 11.04$  years. Moderate stress levels were found in 44.6% of the participants, a high level in 43.3%. The prevalence of stress, on the whole, was 93.6%. Moderate level of stress was more frequent in women ( $p=0,038$ ), and specialists in general practice (GP specialists) ( $p=0,042$ ). The most common stressors were: work overload, administrative tasks, and limited time for the patients' examinations. According to the Freudenberg burnout scale, 43.1% of the participants were very close to being burnt out, and 8.8% had the burnout syndrome. GPs 35 years and younger, and those with  $\leq 10$  years of service were rarely at risk for burnout sy ( $p=0,000$ ), while GP specialists had a higher risk. The rise of the stress level leads to the rise of the burnout sy.

**Conclusion:** The incidence of professional stress is very high among GPs, and the elevation of stress levels leads to more pronounced burnout syndrome.

**Keywords:** professional stress, burnout syndrome, general medicine

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## Uvod

Lekarska profesija je sa visokim radnim zahtevima. Prisutan je visok stepen profesionalnog stresa, što doprinosi čestoj pojavi sindroma sagorevanja na poslu. Brojna istraživanja su pokazala da je profesionalni stres zasupljen više kod lekara nego u ostalim profesijama, a dosadašnja istraživanja da je profesionalni stres prisutan u visokom procentu kod lekara u skoro svim granama medicine<sup>1,2</sup>. Prema definiciji WHO, stres predstavlja odgovor koji ljudi mogu imati kada su izloženi zahtevima posla i pritiscima koji nisu u skladu sa njihovim mogućnostima<sup>3</sup>. Svaki posao koji postavlja posebne psihološke ili fizičke zahteve zaposlenom, sve što može poremetiti pojedinačnu ravnotežu između zahteva i mogućnosti zaposlenog, stvarajući nezadovoljstvo zbog neprilagođenosti tom poslu - predstavlja stress. Uzroci pojave stresa su veoma kompleksni i složeni. Pored toga što prekomerni stres smanjuje kod zaposlenog zadovoljstvo poslom kojim se bavi, dovodi i do lošijeg rezultata njegovog rada, stvara osećaj nesigurnosti i nekompetentnosti, što sve dovodi i do lošijeg kvaliteta života. Takođe, prekomerni stres ometa produktivnost na radu, utiče na fizičko i emocionalno zdravlje i porodični život pojedinca<sup>4</sup>. Dugotrajno prisustvo i delovanje stresa često dovodi do *sindroma sagorevanja na poslu*. Sindrom sagorevanja na radu predstavlja odgovor na dugotrajno delovanje svih stresora koji narušavaju psihički, fizički i socijalni integritet zaposlenog<sup>5</sup>. Dokazano je da se zastupljenost profesionalnog stresa povećava, pa je tako 63% lekara anketiranih 2012. godine u SAD izjavilo da je stres zastupljeniji nego pre tri godine<sup>6</sup>.

## Cilj rada

Ispitati nivo izloženosti lekara u opšjoj medicini profesionalnom stresu i rizik obolevanja od sindroma sagorevanja, kao i uticaj sociodemografskih karakteristika ispitanika na posmatrane parametre.

## Metod

Studija preseka kao istraživanje Sekcije opšte medicine Srpskog lekarskog društva, sprovedena je među lekarima koji su prisutvovali na konferenciji *Dani opšte medicine* održanoj 30.-31.03.2019. u Beogradu i *Vojvođanski dani opšte medicine* 17.-18.05.2019. u Bačkoj Palanci. Za ovo istraživanje formiran je Upitnik koji se sastojao iz tri dela:

1. Upitnik o sociodemografskim karakteristikama ispitanika;
2. Upitnik za određivanje nivoa sindroma sagorevanja - *Freudenbergova skala sagorevanja*, od pet tačaka u rasponu od 0 (nikad), 1 (retko), 2 (ponekad), 3 (često), 4 (uvek). Tumačenje rezultata:  $\leq 25$  bodova - bez rizika za sin-

## Introduction

The medical profession is highly demanding. There is a high level of professional stress, which often leads to burnout syndrome. A huge body of research shows professional stress is more common in physicians than in other professions. The up to date research shows professional stress is highly inherent in physicians of all medical branches<sup>1,2</sup>. According to the WHO definition, stress is a probable person's response to work demands and pressures, which is in discordance with one's possibilities<sup>3</sup>. Every job with high psychological and physical demands for the employee, everything that leads to an imbalance between demands and possibilities of the employee, thus producing discontent due to maladjustment to the job, produces stress. The causes of stress are very complex. Besides decreasing work satisfaction, overwhelming professional stress leads to worse working results, creates insecurity and the feeling of incompetence and eventually worse life quality. Overwhelming stress also hinders work productivity, affects physical and emotional health, and family life of the person<sup>4</sup>. Long term stress often leads to *burnout syndrome*. Burnout syndrome is a response to long term stressors, which undermine the psychic, physical and social integrity of the employee<sup>5</sup>. It is validated, the incidence of professional stress is on the rise. Among polled USA physicians, in 2012, 63% said stress was more prevalent than three years ago<sup>6</sup>.

## Objective

Examine the level of GP's exposure to professional stress and risk of burnout syndrome, as well as the influence of the participants' sociodemographic features on observed parameters.

## Method

A cross-sectional study of the Section of General Medicine of the Serbian Medical Society was performed among physicians who attended the conference *General medicine days*, in Belgrade, from 30.-31.05.2019 and *Vojvodina general medicine days*, in Backa Palanka, from 17.-18.05.2019. We used the questionnaire consisting of three sections:

1. The section about participant's sociodemographic features
2. The section about determining levels of burnout syndrome - *Freudenberg burnout scale*, consisting of five items, scaling from 0 (never), 1 (rarely), 2 (sometimes), 3 (often) to 4 (always). Results interpretation:  $\leq 25$  points – no risk of burnout syndrome; 23-35 points – in the risk area;

drom sagorevanja; 23-35 bodova - u području rizika; 36-50 bodova - kandidat za sindrom sagorevanja; 51-65 bodova - zahvaćenost sindromom sagorevanja i > 65 bodova - stanje kompletne sagorelosti;

3. Upitnik o stresorima na radnom mestu (prema Knežević B. *Stres na radu i radna sposobnost zdravstvenih djelatnika u bolnicama. 2010*) sastojao se od odabranih sedam stresora, a odgovori ispitanika o doživljaju pojedinog stresora vrednovani su ocenama Likertove skale: 0 (nije uopšte stresno), 1 (retko je stresno), 2 (ponekad je stresno), 3 (stresno), 4 (izrazito stresno). Sabiranjem bodova odgovora dobijeni su nivoi stresnosti: ≤ 9 bodova – bez stresa; 10-14 bodova – nizak nivo stresa; 15-22 boda – umeren nivo stresa; 23-30 bodova – visok nivo stresa i >30 bodova – veoma visok nivo stresa.

Dobijeni podaci su predstavljeni kao frekvencije (%) za posmatrane parametre i izražene su kao srednja vrednost sa standardnom devijacijom. Za analizu dobijenih razlika u identifikovanju nivoa sagorevanja i stepena uticaja navedenih stresora korišćen je  $\chi^2$  test i jednofaktorska analiza varijanse ANOVA. Svi upitnici su provereni, ručno uneti i obrađeni softverskim statističkim paketom SPSS 20. Statistička značajnost je definisana za nivo  $p < 0,05$ .

## Rezultati

Lekarima je na oba skupa ukupno podeljeno 750 Upitnika, a vraćeno je i valjano popunjeno 455 (60,67%). Među ispitanicima je bilo 84,8% žena; 49,2% lekari specijalisti opšte medicine, a 79,8% lekara je radilo u ambulantama u gradu. U pogledu starostne strukture, najviše lekara je bilo starije od 55 godina (31,9%), a prosečna starost ispitivane populacije iznosila je 48,15±10,46 god. Najviše lekara (30,1%) bilo je sa radnim stažom od 21 do 30 godina, a približno toliko (27,7%) je bilo i mladih lekara, sa stažom od ≤10 godina. Prosečna dužina radnog staža iznosila je 19,46 ±11,04 godina (Tabela 1).

**Tabela 1. Sociodemografske karakteristike ispitanika/  
Table 1. Participants` sociodemographic characteristics**

Sociodemografske karakteristike ispitanika/ Participants` sociodemographic characteristics	N	%
Pol / Gender		
Muški / Male	69	15,2
Ženski / Female	386	84,8
<b>Godine starosti / Age</b>		
< 36 godina / years	74	16,3
36-45 godina / years	111	24,4
46-55 godina / years	125	27,5
> 55 godina / + years	145	31,9

36-50 points – burnout syndrome candidate; 51-65 points – overcome by burnout and > 65 points – the state of complete burnout.

3. The section about workplace stressors (according to Knezevic B. *Stres na radu i radna sposobnost zdravstvenih djelatnika u bolnicama. 2010*). This section consisted of seven chosen stressors and participants` answers about their experience of individual stressors were measured by Likert scale: 0 (not stressful at all), 1 (rarely stressful), 2 (sometimes stressful), 3 (stressful), 4 (extremely stressful). Adding up the points we came up with stressfulness levels: ≤ 9 – no stress; 10-14 points – low-stress level; 15-22 – moderate stress level; 23-30 – high-stress level; > 30 – very high-stress level.

Acquired data were shown as frequencies (%) for categorical variables, and all continuous variables were shown as mean value with standard deviation,  $\chi^2$  test, and one-way analysis of variance (ANOVA). They were used for measuring differences between variables and identifying the burnout level and the level of stressor`s influence. All the questionnaires were checked, data entered by hand, and processed by software statistical package SPSS20. Statistical significance was defined for the level  $p < 0.05$ .

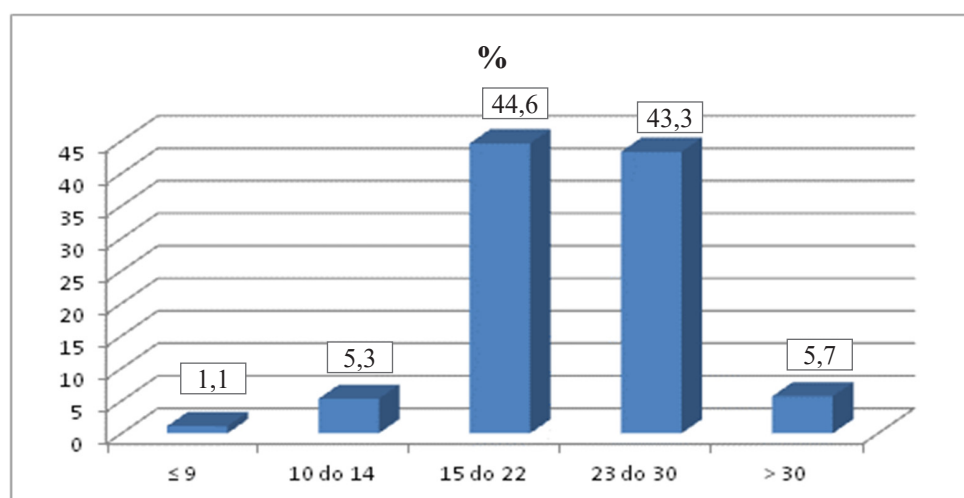
## Results

At both gatherings, 750 questionnaires were distributed, and 455 were returned and properly filled out (60.67%). There were 84.8% women participants; 49.2% of the physicians were specialists in general practice, and 79.8% worked in the cities. Age-wise, the majority of the physicians were over 55 (31.9%) and the average age was 48.15±10.46 years. The largest number of physicians (30.1%) had 21-30 years of service and there were 27.7% of the young participants, with 10 or fewer years of service. The mean duration of years of service was 19.46±11.04. (Table 1).

Radno mesto / Work place location		
Grad / City	363	79,8
Selo / Village	92	20,2
Specijalnost / Specialties		
Lekar opšte medicine / General physician	231	50,8
Specijalista opšte medicine / Specialist in General medicine	224	49,2
Dužina radnog staža / Years of service		
≤ 10 godina / years	126	27,7
11-20 godina / years	108	23,7
21-30 godina / years	137	30,1
>30 godina / years	84	18,5

Obrada odgovora u Upitniku o stresorima na radnom mestu, pokazala je da 44,6% ispitivanih lekara ima umeren a 43,3% visok nivo stresa; prevalencija stresa u celoj ispitivanoj populaciji iznosila je čak 93,6% (Grafikon 1).

Data processing about work stressors showed 44.6% of the participants had a moderate level of stress, 43.3% had a high level, and the prevalence of stress, on the whole, was 93.6%. (Graph 1).



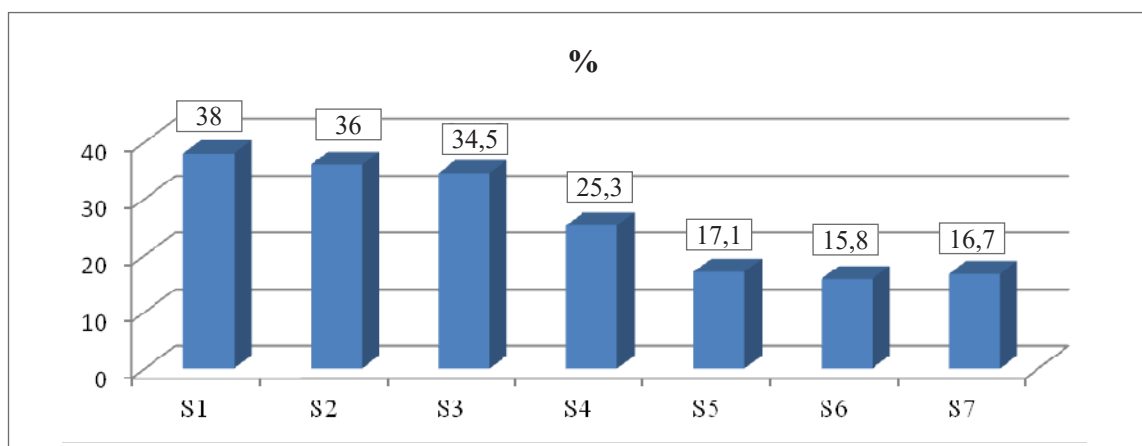
**Grafikon 1. Distribucija ispitanika prema ostvarenim bodovima u Upitniku o uticaju sresoradnog mesta**  
**Graph 1. Distribution of the participants according to the points scored in the questionnaire on the impact of the workplace stressors**

*Nivoi stresnosti:* ≤ 9 bodova – bez stresa; 10-14 bodova – nizak nivo stresa; 15-22 boda – umeren nivo stresa; 23-30 bodova – visok nivo stresa i > 30 bodova – veoma visok nivo stresa

*Stress levels:* ≤ 9 points - no stress; 10-14 points - low level of stress; 15-22 points - moderate level of stress; 23-30 points - high stress level and > 30 points - very high stress level

Prosečan broj bodova u Upitniku o uticaju stresora radnog mesta za celu ispitivanu populaciju iznosio je  $22,57 \pm 5,36$ , što ukazuje da su, u proseku, svi ispitivani lekari imali umeren nivo profesionalnog stresa. Najčešće su stresno delovali: preopterećenost poslom, administrativni poslovi i pritisak vremenskih rokova, odnosno nedovoljno vreme predviđeno za pregled (Grafikon 2). Analizom uticaja stresora radnog mesta kod lekara u opštoj medicini, nađeno je da je umereni nivo stresa češće zastupljen kod žena nego kod muškaraca ( $p=0,038$ ) i kod specijalista opšte medicine u odnosu na lekare opšte medicine ( $p,042$ ), (Tabela 2).

The average points score for the level of work stressors, on the whole, was  $22.57 \pm 5.36$ , which indicates all the participants had a moderate level of professional stress, on average. The most common stressors were: work overload, administrative tasks, and pressure of deadlines/limited time for patient examination. (Graph 2). Analyzing work stressors in GPs we found moderate stress levels were more frequent in women, (as opposed to men,  $p=0.038$ ), as well as in GP specialists (as opposed to GPs,  $p=0.042$ ). (Table 2).



**Grafikon 2. Zastupljenost pojedinih stresora kod ispitanika**  
**Graph 2. Incidence of individual stressors in the participants**

*Stresori radnog mesta lekara u opštoj medicini:* S1 – preopterećenost poslom; S2 – administrativni poslovi; S3 – pritisak vremenskih rokova/vreme predviđeno za pregled; S4 – neadekvatna očekivanja od strane bolesnika i/ili porodice; S5 – sukobi sa bolesnikom i/ili članovima porodice; S6 – oskudna komunikacija sa nadređenima; S7 – oskudna komunikacija sa višim nivoima zdravstvene zaštite.

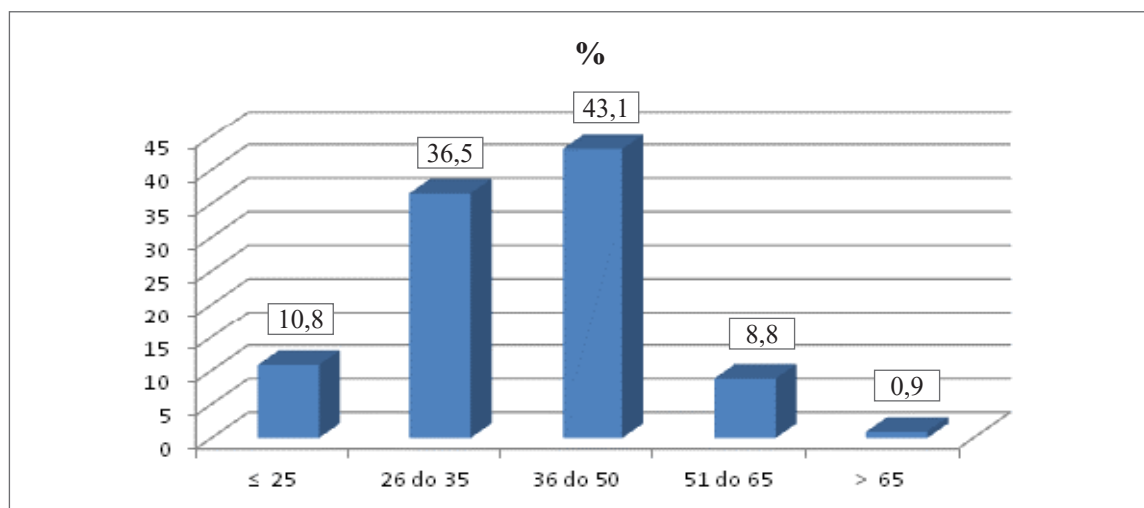
*General practitioners' workplace stressors:* S1 - work overload; S2 - administrative tasks; S3 - pressure of deadlines / allotted time for patient examination; S4 - inadequate expectations of patients and / or family; S5 - conflicts with patients and / or family members; S6 - poor communication with superiors; S7 - scarce communication with higher levels of health care.

**Tabela 2. Učinak stresora radnog mesta kod lekara u opštoj medicini u odnosu na sociodemografske karakteristike ispitanika**  
**Table 2. Effect of workplace stressors in general practitioners in relation to sociodemographic characteristics of respondents**

Sociodemografske karakteristike ispitanika/ Sociodemographic characteristics of participants	Dejstvo stresora na radnom mestu/ Effect of workplace stressors (%)					p
	≤ 9	10 - 14	15 - 22	23 - 30	> 30	
<b>Pol / Gender</b>	0,038					
Muškarci / Male	2,9	10,1	4,9	37,7	4,3	
Žene / Females	0,8	4,4	44,6	44,3	6	
<b>Starost / Age</b>	0,326					
≤ 35 godina / years		2,70	60,80	33,80	2,70	
36 - 45 godina / years	1,80	3,60	45,90	43,20	5,40	
46 - 55 godina / years	0,80	4,00	40,80	47,20	7,20	
> 55 godina / years	1,40	9,00	38,60	44,80	6,20	
<b>Specijalnost / Specialties</b>	0,042					
Lekar opšte medicine / General physician	1,7	6,5	49,4	38,1	4,3	
Specijalista opšte medicine / Specialist in General medicine	0,4	4	39,7	48,7		
<b>Dužina radnog staža / Years of service</b>	0,084					
≤ 10 godina / years	1,6	4	57,1	34,1	3,2	
11-20 godina / years	0,9	4,6	40,7	48,1	5,6	
21-30 godina / years	1,5	5,1	38	48,2	7,3	
> 30 godina / years		8,3	41,7	42,9	7,1	
<b>Radno mesto / Workplace location</b>	0,732					
Grad / City	1,1	5,5	43	44,6	5,8	
Selo / Village	1,1	4,3	51,1	38	5,4	

Obradom odgovora u Freudenbergovoj skali sagorevanja, nađeno je da su u najvećem procentu (43,1%) lekari bili kandidati za sindrom sagorevanja, a oko 9% bilo je zahvaćeno sindromom sagorevanja (Grafikon 3). Prosečan broj bodova Freudenbergove skale za celu ispitivanu populaciju iznosio je  $37,33 \pm 10,001$ , što ukazuje da su prosečno, svi ispitivani lekari bili kandidati za sindrom sagorevanja.

Processing data in the Freudenberg burnout scale we found the majority of the physicians were burnout syndrome candidates (43.1%), and 9% had burnout syndrome. (Graph 3). The average points count in the Freudenberg burnout scale, for all participants, was  $37.33 \pm 10.001$ , indicating all polled physicians were burnout syndrome candidates.



**Grafikon 3. Ditrubucija ispitanika prema Freudenbergovoj skali sagorevanja**  
**Graph 3. Participants distribution according to the Freudenberg combustion scale**

*Nivo sindroma sagorevanja* ≤ 25 bodova – bez rizika za sindrom sagorevanja; 26-35 bodova – područje rizika za sindrom sagorevanja; 36-50 bodova – kandidat za sindrom sagorevanja; 51-65 bodova – zahvaćenost sindromom sagorevanja i > 65 bodova – stanje kompletne sagorelosii.

*Level of burnout syndrome:* ≤ 25 points - no risk for burnout syndrome; 26-35 points - risk area for burnout syndrome; 36-50 points – candidate for burnout syndrome; 51-65 points burnout syndrome and > 65 points – state of complete burnout syndrome.

Analiza izraženosti sindroma sagorevanja u odnosu na sociodemografske karakteristike ispitanika, pokazala je da su lekari ≤ 35 godina i sa radnim stažom ≤ 10 godina statistički značajno češće od ostalih bili bez rizika za sindrom sagorevanja, ili samo u području rizika za sindrom sagorevanja ( $p=0,000$  i  $p=0,001$ ), kao i da su specijalisti opšte medicine češće kandidati za sindrom sagorevanja od lekara opšte medicine (Tabela 3, Tabela 4, Grafikon 4).

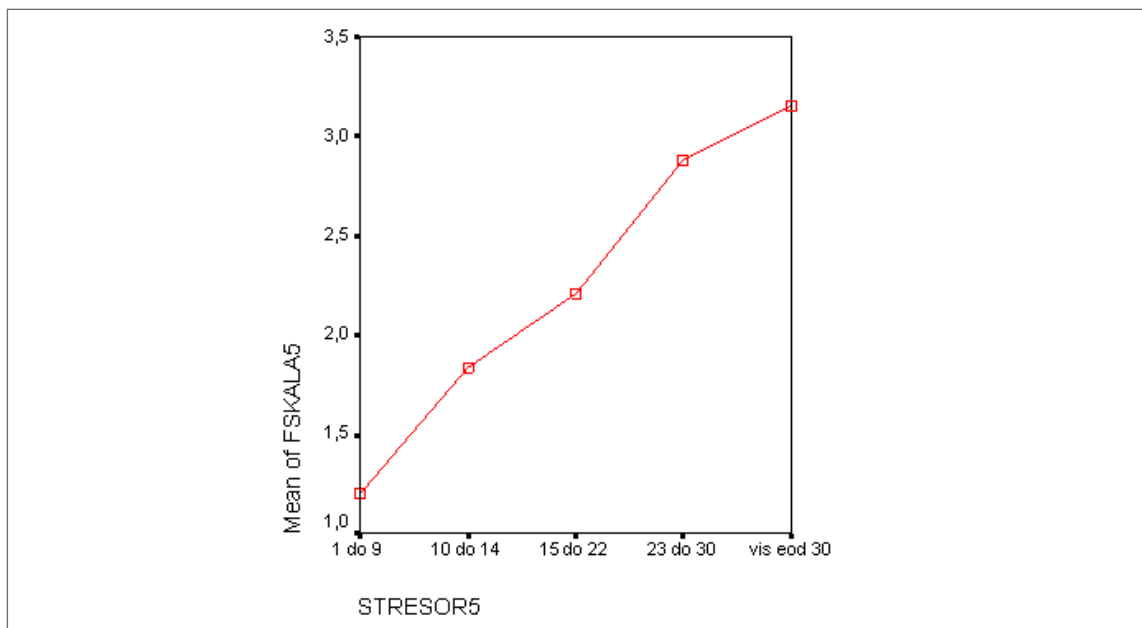
Analyzing burnout syndrome levels concerning participants' sociodemographic data we found physicians ≤ 35 years of age and ≤ 10 years of service were significantly without risk for burnout or at least in the risk area, when compared to other participants ( $p=0.000$  and  $p=0.001$ ). On the other hand, GP specialists were more often burnout syndrome candidates when compared to GPs. (Table 3, Tabela 4, Graph 4).

**Tabela 3. Izraženost sindroma sagorevanja kod lekara u opštoj medicini u odnosu na sociodemografske karakteristike ispitanika.**  
**Table 3. The events severity of burnout syndrome in general physicians in relation to the sociodemographic characteristics of participants**

Sociodemografske karakteristike ispitanika/ Sociodemographic characteristics of participants	Freudenbergerova skala sagorevanja/ Freudenberg Contribution burnout Scale (%)					p
	≤ 25	26 - 35	36 - 50	51 - 65	> 65	
<b>Pol / Gender</b>	0,431					
Muškarci / Male	15,9	37,7	34,8	10,1	1,4	
Žene / Females	9,8	36,3	44,6	8,5	0,8	
<b>Starost / Age</b>	0,000					
≤ 35 godina / years	17,60	58,10	21,60	2,70		
36 - 45 godina / years	12,60	29,70	45,90	10,80	0,90	
46 - 55 godina / years	8,00	32,80	48,00	9,60	1,60	
> 55 godina / years	8,30	33,80	47,60	9,70	0,70	
<b>Specijalnost / Specialties</b>	0,004					
Lekar opšte medicine / General physician	15,2	39,4	36,4	8,7	0,4	
Specijalista opšte medicine// Specialist in General practice	6,3	33,5	50	8,9	1,3	
<b>Dužina radnog staža / Years of service</b>	0,001					
≤ 10 godina / years	17,50	44,40	31,70	6,30		
11-20 godina / years	9,30	34,30	46,30	8,30	1,90	
21-30 godina / years	8,80	28,50	50,40	10,90	1,50	
> 30 godina / years	6,00	40,50	44,00	9,50		
<b>Radno mesto / Workplace location</b>	0,623					
Grad / City	15,9	37,7	34,8	10,1	1,4	
Selo / Village	9,8	36,3	44,6	8,5	0,8	

**Tabela 4. Povezanost učinka stresora radnog mesta na izraženost sindroma sagorevanja kod lekara opšte medicine**  
**Table 4. Relationship between the effect of workplace stressors and the incidence of burnout syndrome in GPs**

Freudenbergerova skala sagorevanja / Freudenberg burnout scale		Skala nivoa stresa / Scale of stress levels		
Nivo sindroma sagorevanja/ Burnout syndrom level	%	%	Nivoi stresnosti / Stress	levels
Bez rizika za sindrom sagorevanja / No risk for burnout syndrome	10,8	1,1	Nije uopšte stresno/ points - no stress	
Područje rizika za sindrom sagorevanja / Risk area for burnout syndrome	36,5	5,3	Retko stresno/ - Low stress	level
Kandidat za sindrom sagorevanja / Candidate for burnout syndrome	43,1	44,6	Ponekad stresno/ Moderate stress	level
Zahvaćenost sindromom sagorevanja / Burnout syndrome	8,8	43,3	Stresno/ points – High stress level	
Stanje kompletne sagorelosti / State of complete burnout	0,9	5,7	Izrazito stresno/ - Very high stress	level



**Grafikon 4. Povezanost nivoa stresa radnog mesta sa izraženošću sindroma sagorevanja kod lekara opšte medicine**  
**Graph 4. Relationship between workplace stress levels and the incidence of burnout syndrome in GPs**

*Nivoi stresnosti:* ≤ 9 bodova – bez stresa; 10-14 bodova – nizak nivo stresa; 15-22 boda – umeren nivo stresa; 23-30 bodova – visok nivo stresa  
i > 30 bodova – veoma visok nivo stresa

*Stress levels:* ≤ 9 points - no stress; 10-14 points - low stress level; 15-22 points - moderate stress level; 23-30 points - high stress level  
and > 30 points - very high stress level.

## Diskusija

Lekari su izloženi visokom nivou stresa i posebno su podložni sindromu sagorevanja<sup>7</sup> Brojna istraživanja su pokazala da je profesionalni stres zasupljen više kod lekara nego kod ostalih profesija<sup>1</sup>, a dosadašnja istraživanja su pokazala da je stres na radnim mestima u zdravstvenim ustanovama u stabilnoj ekspanziji<sup>8</sup>. Podaci iz literature o prevalenciji stresa kod lekara veoma su različiti, što je uslovljeno upotrebom različitih *alata* za procenu prisustva i nivoa stresa. Prevalencija stresa kod naših ispitanika iznosila je čak 93,6%, dok je bez stresa bilo samo 1% lekara. Budimski MV. i saradnici<sup>2</sup> su našli da je kod zaposlenih u 15 službi Hitne medicinske pomoći 30% zaposlenih bez simptoma povezanih sa stresom. Kod mlađih lekara u bolnicama u Ibadenu, u istraživanju Adcolua JO i saradnika<sup>9</sup> prevalencija stresa je iznosila 31,6%. U našem istraživanju kod približno istog broja lekara zastupljen je umeren i visok nivo stresa, a samo kod oko 6% taj stres je bio veoma visok. Baić V<sup>10</sup> u istraživanju sprovedenom među zaposlenima u Gradskom zavodu za hitnu medicinsku pomoć u Beogradu, nalazi da je 44,3% zaposlenih izloženo visokom nivou stresa, što se apsolutno podudara i sa našim rezultatima (kod 43,3% ispitanika), dok Vićentić S. i saradni-

## Discussion

Physicians are exposed to high-level stress and they are especially susceptible to burnout syndrome<sup>7</sup>. A huge body of research shows professional stress is more common in physicians than other professions<sup>1</sup>. Up to date research shows work-related stress in health institutions is in stable expansion<sup>8</sup>. Literature data on stress prevalence in physicians differ widely, which is usually the consequence of the use of different tools for detecting stress presence and stress level assessment. Stress prevalence in polled physicians was 93.6%, while only 1% was without stress. *Budimski M.V. et al*<sup>2</sup> found 30% of the employees working in 15 Emergency departments were without stress-related symptoms. The research of *Adelou J.O. et al*<sup>9</sup> in young physicians in Ibadan showed stress prevalence was 31.6%. In our research, a similar number of physicians had moderate and high levels of stress, and only 6% had very high levels of stress. The research of *Baić V.*<sup>10</sup>, performed in the City Department of Emergency medicine, Belgrade found 44.3% of the employees were exposed to high-stress levels, which is in accordance with our findings (43.3% of the participants). *Vicentic S. et al*<sup>11</sup> in their research on the professional stress prevalence in general physicians



ci<sup>11</sup> u istraživanju o zastupljenosti profesionalnog stresa kod lekara opšte medicine i psihijataru, navode da je ukupan nivo psihičkog stresa u obe grupe bio nizak. Kushal A. i saradnici<sup>4</sup> u svom istraživanju o zastupljenosti stresa kod zdravstvenih radnika, našli su samo prisustvo umerenog stresa kod 59% ispitanika, odnosno nije bilo visokog nivoa stresa. U studiji preseka sprovedenoj u Saudijskoj Arabiji<sup>12</sup>, na 528 lekara specijalista (uključeni su bili i specijalisti porodične medicine) utvrđeno je da 44% doživljavaju umeren do visok nivo stresa na poslu. Baba I<sup>13</sup> nalazi da je kod 71,2% lekara u bolnicama prisutan stres, od čega je kod 14% nivo stresa veoma visok, dok samo 16% ispitivanih lekara ima nizak nivo stresa. U našem istraživanju, kod 5,3% ispitanika je nivo stresa nizak. Stanetić KD i saradnici<sup>14</sup> su analizirali nivo stresa i rizik za obolevanje od sindroma sagorevanja kod lekara u tri doma zdravlja i bolnici u Republici Srpskoj. Kod polovine ispitanika našli su visok nivo stresa, koji je bio nešto viši kod porodičnih lekara, ali da ta razlika nije bila statistički značajna.

U našem istraživanju, najčešće su na ispitivane lekare stresno delovali: preopterećenost poslom, administrativni poslovi i pritisak vremenskih rokova / vreme predviđeno za pregled. Lazaridis K. u svom istraživanju kao najčešće uzroke stresa navodi: nedovoljan broj zaposlenih, povećan obim posla, veće obolevanje stanovništva, mala sloboda odlučivanja, mala nadoknada za uloženi rad i malo vremena da se posao završi<sup>8</sup>. U radu Budimski MV<sup>2</sup> sa saradnicima najčešći izvor stresa među zaposlenima u službama hitne medicinske pomoći je previše administracije - kod 62% ispitanika, a uslovi rada ne utiču u znatnoj meri na doživljaj stresa. Kumar S<sup>7</sup> u svom radu kroz pregled literature navodi da se lekarima nameću birokratski zahtevi koji se stalno menjaju i povećavaju, lekari moraju da ispunjavaju brojne administrativne dužnosti, što sve predstavlja značajan činilac povećavanja njihovog profesionalnog stresa. U već navedenom istraživanju Alosaimi FD i saradnika<sup>12</sup> u Saudijskoj Arabiji najzastupljeniji stresori su preopterećenost poslom, nesaradnja sa rukovodstvom i dužina radnog vremena, što se podudara sa rezultatima Michael R i saradnika<sup>6</sup> u istraživanju sprovedenom u San Francisku, gde su prva tri uzroka profesionalnog stresa papirologija i administrativni zahtevi, previše sati rada i raspored dežurstava. O stresnoj vezi administrativnih poslova i preopterećenosti poslom svedoče i rezultati istraživanja Knežević B<sup>15</sup> na 1.856 zaposlenih u pet bolnica u Zagrebu.

U odnosu na specijalnost, Lazarević KL<sup>8</sup> navodi da je ukupan nivo stresa statistički značajno veći kod zaposlenih u ustanovama na sekundarnom i tercijarnom nivou u odnosu na zaposlene u ustanovama na primarnom nivou zdravstvene zaštite. Međutim, rezultati istraživanja Stanetić DK i saradnika<sup>14</sup> pokazali su da je visok nivo stresa bio nešto više zastupljen kod porodičnih lekara u odnosu na bolničke lekare, ali da ta razlika nije bila statistički značajna. Istraživanje Vićentić S i saradnika<sup>11</sup> o profesionalnom stresu kod le-

and psychiatrists found a low level of psychic stress in both groups. Kushal A. et al<sup>4</sup> performed research on stress prevalence in health workers and their findings showed 59% of the respondents had moderate stress levels, without a significant number of those at high-stress levels. A cross-sectional study from Saudi Arabia<sup>12</sup> included 528 specialists (including specialists in family medicine) and found 44% of the participants experienced moderate to high work-related stress levels. Baba I.<sup>13</sup> detected stress in 71.2% of the physicians working in the hospitals, of whom 14% had a very high-stress level, while 16% had low-stress levels. In our research low-stress levels were found in 5.3% of the participants. Stanetić K.D. et al<sup>14</sup> analyzed stress levels and risk of burnout syndrome in 3 Primary health centers and a hospital in the Republic of Srpska. High levels of stress were found in half of the respondents. The statistics showed it was a bit higher in family physicians but the difference had no statistical significance.

Our research confirmed physicians found these problems to be most stressful: work overload, administrative tasks, the pressure of deadlines, less time in the examination room. Lazaridis K. points out these most common causes of stress: lack of staff, work overload, more ill people, limited decision making, low salaries for such hard work, not enough time to finish all the tasks<sup>8</sup>. Budimski M.V. et al<sup>2</sup> found the most common cause of stress among the employees working in the Emergency departments was too much administrative work – in 62% of the participants, while working conditions didn't affect much employees' stress levels. Kumar S.<sup>7</sup> in his study reviewed literature and found versatile and increasing bureaucratic tasks were inflicted upon physicians. They have to fulfill numerous administrative tasks which are an important factor in elevating their professional stress. In the mentioned research of Alosaimi F.D. et al<sup>12</sup> in Saudi Arabia, the most common stressors were: work overload, the lack of co-operation with the management and long working hours, which was consistent with the results of Michael R. et al<sup>6</sup> in San Francisco. He found three most frequent causes of professional stress were: paperwork and administrative tasks, long working hours, and the duty rosters. The stressful relationship between administrative tasks and work overload is witnessed in the research results of Knežević B.<sup>15</sup> He performed his research on 1.856 employees working in 5 hospitals in Zagreb.

In relation to speciality, Lazarević K.L.<sup>8</sup> specifies the total level of stress was statistically significantly higher in health workers working in secondary and tertiary health facilities than in primary health care. But research results of Stanetić D.K. et al<sup>14</sup> showed high level of stress was more common in family physicians than in hospital based colleagues, but this difference wasn't statistically significant. The research of Vićentić S. et al.<sup>11</sup> on professional stress in GPs and psychiatrist had contrary results. The total level of psychic stress was low in both groups, but they found the

kara opšte medicine i psihijataru, donosi suprotne rezultate, odnosno da je ukupan nivo psihičkog stresa u obe grupe bio nizak, ali da povećanje stepena psihičkog distresa uslovljava viši stepen emocionalne iscrpljenosti poslom.

U našem istraživanju, nađeno je da je kod žena i kod specijalista opšte medicine češće prisutan umeren nivo stresa. U radovima Knežević T., Viehmann A i saradnika i Alosaimi FD i saradnika takođe je nađena značajno veća prevalencija stresa kod žena,<sup>5,16,12</sup> dok neke studije nalaze viši nivo stresa kod muškaraca<sup>4,17,13</sup>. Starost ispitanika, njihova dužina radnog staža i radno mesto (grad/selo) kod naših ispitanika nisu uticali na nivo profesionalnog stresa. Takođe, u istraživanju Viehmann A i saradnika<sup>16</sup> na 214 lekara opšte medicine u Nemačkoj i u radu Adeolu JD<sup>9</sup>, Budimskog V i saradnika<sup>2</sup> nalaze da se simptomi profesionalnog stresa češće javljaju kod mlađih lekara i lekara starijih od 56 godina. Alosaimi FD i saradnici<sup>12</sup>, kao i Baic V<sup>10</sup> navode da su mlađi lekari imali značajno češće visok nivo profesionalnog stresa. Nasuprot njima, Knežević B<sup>15</sup> nalazi da je intenzitet učinka manji ukoliko su ispitanici stariji. U pogledu dužine radnog staža, Kushal A i saradnici navode da lekari sa dužim radnim stažom bolje upravljaju stresom, te je i nivo stresa značajno niži.

Obradom odgovora u Freudenbergovoj skali sagorevanja u našem istraživanju, ispitivani lekari u najvećem procentu su bili kandidati za sindrom sagorevanja, a oko 9% je bilo zahvaćeno ovim sindromom. Prosečan broj bodova ispitanika po Freudenbergovoj skali ukazuje da su svi ispitivani lekari bili kandidati za sindrom sagorevanja. Što se tiče izraženosti sindroma sagorevanja, posmatrano u odnosu na sociodemografske karakteristike ispitivane populacije, nađeno je da su lekari  $\leq 35$  godina i oni sa radnim stažom  $\leq 10$  godina statistički značajno češće od ostalih bili bez rizika za sindrom sagorevanja ili samo u području rizika za sindrom sagorevanja ( $p=0,000$  i  $p=0,001$ ), kao i da su specijalisti opšte medicine češće kandidati za sindrom sagorevanja od lekara opšte medicine. Stanetić KD i saradnici<sup>14</sup> nalaze da postoji visok rizik za obolevanje od sindroma sagorevanja i kod lekara u domovima zdravlja i u bolnici, i da razlika između ovih grupa nije statistički značajna. Takođe, našli su da lekari stariji od 45 godina imaju značajno viši nivo emocionalne iscrpljenosti. Visok nivo rizika za sindrom sagorevanja kod više od 50% lekara urgentne medicine i psihijataru, te da je značajno izraženiji kod muškaraca nalazi u svome radu Vićentić S<sup>17</sup>. U istraživanju Viehmann A i saradnika<sup>16</sup> mlađi lekari i žene imaju veći rizik od sindroma sagorevanja u odnosu na starije lekare i muškarce, a u stanju potpune izgorelosti je 7,5% lekara. Među našim ispitivanim lekarima nešto manje od 1% ih je u stanju potpune izgorelosti. Ghaida MJ<sup>18</sup> sa saradnicima u radu čiji je cilj da uporedi učestalost visokog stepena sindroma sagorevanja između lekara opšte medicine i lekara porodične medicine, nalaze da je sindrom sagorevanja na poslu češće zastupljen kod lekara opšte medicine. Zhi Xuan

elevation of the level of psychic distress led to higher level of emotional exhaustion at work.

As far as sociodemographic data of the participants go, our research found women had moderate levels of stress more often than men. The same goes for GP specialists, as compared to GPs. The results of some studies show much higher prevalence of stress in women<sup>5,12,16</sup> but some show higher prevalence in men<sup>4,13,17</sup>. Our study found participant's age, years of service, working place (rural/urban) didn't affect the level of professional stress. The research of Viehmann A. et al<sup>16</sup> on 214 GPs in Germany, as well as the research of Adeolu J.D.<sup>9</sup>, Budimski D. et al<sup>2</sup> found the symptoms of professional stress were more common in younger physicians and those over 56 years of age. Alosaimi F.D. et al<sup>12</sup> and Baic V.<sup>10</sup> detected younger physicians had higher prevalence of high level of professional stress. On the other hand, Knezevic B<sup>15</sup> finds the intensity of stress is lower as the participants get older. As far as years of service are concerned, Kushal A. et al find physicians with more years of service manage stress better, and therefore their stress levels are much lower.

Processing answers in the Freudenberger burnout scale we found the participants were mostly burnout candidates and around 9% had burnout syndrome. The average score points in the Freudenberger burnout scale points out all the participants were burnout candidates. In relation to sociodemographic data of the participants, we found the levels of burnout syndrome were very low or in the risk area for physicians  $\leq 35$  years of age and those with  $\leq 10$  years of service ( $p=0,000$  i  $p=0,001$ ). GP specialists were more often burnout syndrome candidates when compared to GPs. Stanetić K.D. et al<sup>14</sup> found the high risk of burnout in both physicians in primary health care and in hospitals and the difference between groups had no statistical significance. They also detected physicians over 45 years of age had significantly higher levels of emotional exhaustion. High risk levels for burnout syndrome in more than 50% of emergency care physicians and psychiatrists, as well as significantly higher risk in male participants was found in the research of Vićentić S<sup>17</sup>. The research of Viehmann A. et al<sup>16</sup> showed younger physicians and women were at higher risk of burnout syndrome when compared to older physicians and men, and 7.5% of the physicians were in the state of the complete burnout. In our research, less than 1% of the participants were in the state of complete burnout. Ghaida M.J. et al<sup>18</sup> compared the incidence of high-level burnout syndrome between GPs and family physicians and their findings confirmed a higher incidence in GPs. Zhi Xuan Low et al<sup>19</sup> performed a huge meta-analysis study, analyzing the prevalence of burnout syndrome by specialty and risk factors which might lead to it. The study included 22.778 physicians and their findings confirm the highest prevalence of burnout in radiologists, neurologists, and general surgeons and the lowest in psychiatrists, oncologists and family physicians. The higher prevalence of burnout was found in older

Low i saradnici<sup>19</sup> uradili su veliku metaanalizu studija u svetu koje su analizirale stopu prevalencije sindroma sagorevanja po specijalnostima i faktore koji doprinose tome, a koje su sprovedene na 22.778 lekara i našli da je najveća prevalencija izgaranja bila kod radiologa, neurologa i opštih hirurga, a najmanja u psihijatriji, onkologiji i porodičnoj medicini. U meta-analizi se navodi i da je veća prevalencija izgaranja bila kod osoba starijeg životnog doba i kod muškaraca, a da se prevalencija izgaranja nije menjala u odnosu na dužinu radnog staža. Kod radnika zaposlenih u Hitnoj pomoći u Beogradu 45,7% ispitanika je kandidat za sindrom sagorevanja, a čak 17,1% ih je u fazi sagorelosti. Kovačević T i Mikov I<sup>20</sup> navode da lekari opšte medicine i lekari koji rade u državnim ustanovama, kao i oni koji imaju više rada u smenama, pod većim su rizikom od razvoja sindroma sagorevanja, a kao važan prediktivni faktor su preopterećenost poslom i konflikti sa kolegama i saradnicima.

Upoređivanje dobijenih rezultata oba Upitnika pokazalo je da sa porastom učinka stresora kod lekara u opštoj medicini raste i izraženost sindroma sagorevanja. U našem istraživanju 43,3% lekara ima visok nivo stresa kao odgovor na odabrane stresore radnog mesta, a samo je oko 9% zahvaćeno sindromom sagorevanja. Prema Wong JG<sup>21</sup>, lekari, možda nisu obučeni da prepoznaju stres, a većina lekara smatra da je njihova bolest stigma, posebno kada je problem psihološke prirode. U brojnim studijama utvrđena je značajna povezanost profesionalnog stresa sa rizičnim ponašanjima, kao što su pušenje i gojaznost i kliničkim poremećajima: hipertenzija, ishemijska bolest srca, dislipidemija i dijabetes tip 2<sup>22</sup>. Na sindrom sagorevanja lekara utiču brojni faktori, ima ozbiljne posledice kako na lekare i kvalitet njihovog rada, tako i na pacijente i održivost i efikasnost čitavog zdravstvenog sistema, a ipak se ovom problemu ne poklanja dovoljno pažnje. Izgleda da lekari smatraju da je stres sastavni i neodvojivi deo njihove profesije i da moraju da se nose sa tim. Međutim, lekari opšte medicine moraju se obučavati da upravljaju stresom, da profesionalni stress prevaziđu radi primarne prevencije sindroma sagorevanja na poslu, koji ostavlja ozbiljne posledice na njihovo zdravlje i na njihov profesionalni rad.

## Zaključak

Nađena je veoma visoka zastupljenost stresa u ispitivanoj populaciji, a nešto manje od polovine imalo je visok nivo stresa. Umeren nivo stresa češće je zastupljen kod žena i kod specijalista opšte medicine. Najčešći stresori su: opterećenost poslom, administrativni poslovi i pritisak vremenskih rokova/nedovoljno vreme predviđenog za pregled. Najveći procenat lekara je bio kandidat za sindrom sagorevanja i češće su to bili specijalisti opšte medicine. Mlađi lekari i oni sa radnim stažom  $\leq 10$  godina statistički značajno češće od ostalih su bili bez rizika za sindrom sagorevanja. Sa porastom nivoa stresa raste i izraženost sindroma sagorevanja.

persons and men, and the prevalence didn't change in relation to years of service. In the employees of the Emergency Department, Belgrade, 45.7% of the participants were burnout syndrome candidates and 17.1% were completely burnt out. Kovačević T. and Mikov I.<sup>20</sup> found GPs and physicians working in the state facilities, as well as the physicians often working shifts were at higher risk of burnout and the important predicting factors were work overload and conflicts with colleagues and associates.

Comparing the results of both questionnaires we found the elevation of stressor factors in GPs leads to the increase of burnout syndrome. In our research, 43.3% of the physicians had high levels of stress, as a response to selected work stressors and only 9% had burnout syndrome. According to Wong J.G.<sup>21</sup> physicians might not be educated to recognize stress, but the majority of them think their illness is stigma, especially if it's of the psychological variety. Many studies confirmed a significant connection between professional stress and risk health behaviors such as smoking and obesity, and diseases like hypertension, coronary heart disease, dyslipidemia and diabetes type 2<sup>22</sup>. The burnout syndrome in physicians is affected by numerous factors and it has very serious consequences on physicians and the quality of their work performance, but it also affects patients and the sustainability and efficacy of the health system. Nevertheless, this problem is not seriously taken into consideration. It seems physicians find stress an integral part of their job and they have to fight it. All the same, GPs must be educated to manage stress, overcome professional stress for the sake of the primary prevention of burnout syndrome at work. The burnout syndrome has grave consequences on physicians' health and their professional work.

## Conclusion

We found a very high stress incidence in our participants and less than half of them had very high levels of stress. Moderate levels of stress were more common in women and GP specialists. The most common stressors were: work overload, administrative tasks, and pressure of time limitations/limited time for patients' examination. The majority of the physicians were burnout syndrome candidates and it was more common in GP specialists. Younger physicians and those with  $\leq 10$  years of service had a significantly lesser risk of burnout syndrome when compared to other participants. With the elevation of stress levels, the burnout syndrome incidence increases as well.

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