

Work-related stress in specialists in occupational health in Croatia: a pilot study

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The aim of this study was to assess psychosocial stress-related risks in 70 specialists in occupational health (SOHs) who answered the questionnaire designed in 2016 by the Croatian Institute of Public Health – Department of Occupational Health. The average score of 119.7 points (± 28.9 ; range: 38–175) of maximum 275 points revealed medium level of stress. Eighteen respondents had a high level of stress (>135 points). The most prominent and the only stressor with high stress scores was pressure at work, paperwork and multitasking items in particular. After having grouped the SOHs into three groups by type of organisation in which they work, our results singled out SOHs working in public institutions as having the highest levels of stress (average of 143 points). They reported high pressure at work, work overload, and poor relationship with superiors (in terms of communication and support). SOHs working in healthcare centres and private outpatient clinics also reported higher pressure at work, but the latter had no problems with relationship with superiors, while healthcare centre SOHs complained of work underload and advancement constraints. Differences in relationship with superiors, disagreement/conflicts at work and advancement constraints reflect different organisation of work, which was confirmed by later analysis of subgroups. The findings of this pilot study could be of value for SOHs who are engaged in training programmes as examiners and educators, yet they call for further improvement of the questionnaire and for continued investigation that could give a better insight into the role of various stressors in work efficiency and satisfaction among SOHs.

KEY WORDS: psychosocial risks; physicians; questionnaire; work-related stress

Currently, work-related stress is one of the greatest challenges for occupational health and safety (1). Croatian Occupational Health and Safety Act (2) stipulates that it is assessed and managed by occupational health physicians, who have set up a step-by-step procedure for assessing psychosocial risks and recommending measures to reduce stress at the workplace (3). This procedure provides a unique medical algorithm for occupational health physicians and the tools to assess psychosocial risks, stress, and burnout. It also defines preventive and secondary measures to control these risks. One such tool is a questionnaire assessing psychosocial risks designed by the Croatian Institute of Public Health – Department of Occupational Health in 2016 (4). This questionnaire is also completed by specialists in occupational health (SOHs), who are the members of Croatian Society of Occupational Medicine as part of their training programme. Considering that we had already had available data from this group of SOHs, we felt that we could use them to assess their own psychosocial risks at work, as there is little recent literature on the subject in Croatia. These data also gave us an opportunity to look into differences between them with

regard to the structure of the organisation in which they work.

PARTICIPANTS AND METHODS

The survey was conducted in 2018 and included 70 SOHs, who were divided in three groups according to the type of organisation in which they work. Eleven were employed in public institutions, 13 in community healthcare centres (HC), 21 in private outpatient clinics that provide healthcare services either under lease at HCs or polyclinics or in their private facilities, and 25 provided no information as to their current employment organisation. All respondents signed a consent for anonymous participation.

Psychosocial risks at work were assessed through 11 key aspects (stressors containing five items each) using the questionnaire designed by the Croatian Institute of Public Health – Department of Occupational Health in 2016 (4). Scores of each aspect can range between 5 and 25 points, and the score of 14 points and above indicates high stress for this aspect. The sum of all aspects can range between 55 and 275 points, with 135 points set as a threshold for high overall level of stress.

The results were analysed with the SPSS for Windows version 25 (SPSS Inc., Chicago, IL, USA) using descriptive

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statistics and analysis of variance (ANOVA). Statistical significance was set at $p < 0.05$ (5).

RESULTS AND DISCUSSION

The overall score of 119.7 points (± 28.9 ; range: 38–175) of maximum 275 suggests that specialists in occupational health have a medium level of stress (Figure 1). Eighteen respondents reported a high level of stress (> 135 points), five of whom worked in private outpatient clinics, three in healthcare centres, six in public institutions, while four did not specify their current organisation of employment.

Statistical analysis showed significant differences between the groups divided by organisational structure. With the overall average of 143 points SOHs employed in public institutions had a significantly higher risk of stress ($p < 0.05$) than other SOHs. Pressure at work turned out to be the most prominent stressor and the only one that showed high stress for all SOHs (Table 1).

A more detailed analysis of stressors by groups is shown in Figure 2, while the significance of the stressor effect is reported in Table 1. For SOHs in public institutions, the highest-scoring stressors were pressure at work, overload, poor relationship with superiors (lack of communication and support), and advancement constraints.

Figure 3 reports the differences in stressor scores observed for SOHs employed in HC and those in private outpatient clinics. SOHs who worked in private outpatient clinics reported a significantly higher pressure at work but did not perceive their relationship with superiors as stressful. SOHs in HCs complained of work underload and advancement constraints. A detailed analysis of stressor items (Table 2) showed a significant difference between SOHs in private clinics and SOHs in HCs.

The last few years have seen a rising number of reports on work-related stress and burnout in physicians. (6, 7). Physician burnout in the United States has reached epidemic proportions with prevalence now exceeding 50 %, according to a review published in 2017 by Rothenberger (6). Work-

related stress has been associated with different diseases in different medical specialties (8–12) and a number of stress relief methods have been studied to help them (13–15).

Our pilot study was focused on assessing work-related stress in physicians specialising in occupational medicine and sports, as there is little recent literature on the subject in Croatia. In a 2011 study (17) conducted among physicians working at the University Clinical Centre in Tuzla, Bosnia and Herzegovina, 37.4 % reported emotional exhaustion, while 50% reported low sense of accomplishment.

Our findings suggest that only 25% of SOHs showed higher levels of stress, which can be attributed to most of them working either alone or in smaller healthcare settings rather than in hospitals. A 2017 study (18) reported lower stress levels among physicians in public hospitals than in private clinics. Our study found the opposite; the highest levels of stress were reported by SOHs working in public institutions, while SOHs working in private clinics reported the lowest stress. We have also found that work satisfaction reported by SOHs employed in public institutions is highly associated with interpersonal relationships. An earlier report (19) suggests that conflicts with supervisors can lead to reduced resources and negative attitude towards work and that lowering work-related stress among physicians employed in public institutions greatly depends on effective conflict management.

Our assumption that different work organisation could significantly affect results was confirmed by a more detailed analysis of individual stressors at work by organisational subgroups. The pressure at work aspect revealed that the SOHs in private clinics complained of having to do a lot of paperwork, multitasking, and high impact of work on their private lives. SOHs in HCs complained that they could not push their ideas past superiors, could not communicate with them, could not predict their reactions, and did not get quality feedback from them (relationship with superiors aspect). They also reported too low responsibility at work (work underload aspect) and having to pretend that they were busy. As for the advancement constraints aspect, SOHs



Figure 1 Total stress scores in specialists in occupational health by organisational structure

Table 1 Differences in stress aspect (stressor) scores between specialists in occupational health by organisational structure

	N	Disagreement/conflict at work	Pressure at work	Ambiguity of work tasks	Relationship with supervisors	Work-related health concerns	Overload	Underload	Boredom with work	Job insecurity	Time pressure	Advancement constraints	Total score
All	70	9.3	15.9*	11.9	10.2*	9.2	12.7	10.4*	9.9*	9.3	11.7	9.1*	119.7*
Private practices	21	8.7	17	10.9	7.3	10.2	12.3	9.2	8.4	8.3	11.1	6.6	110.0
Healthcare centres	13	9.8	13.6	11.9	11.5	9.2	12.2	12.1	10.3	10.8	10	10.5	122.1
Public institutions	11	10.8	17.1	14	14	9.4	15.3	13.4	12.8	10.9	13.8	11.9	143.4
Not specified	25	8.7	15.8	11.8	10.3	8.3	12.2	9.2	9.9	8.8	12.1	9.2	116.2

* significant difference between groups (P<0.05)

Table 2 Differences in responses by stressor (aspect) and specific items between specialists in occupational health working in private practices and community healthcare centres

Stressor	Items	P
Pressure at work	Multitasking (multiple jobs at the same time)	0.004*
	Over-control of the superiors	0.014*
	Impact of work on private life	0.423
	I have to get the job done quickly	0.017*
	Too much paperwork	0.150
Relationship with superiors	Too much paperwork	0.001*
	My ideas are different from those of the superiors	0.005*
	I have no opportunity to speak to the superior	0.001*
	I cannot predict the reactions of the superiors	0.021*
	My supervisor gives me too little feedback on quality	0.006*
Work underload	My superior criticizes me too much	0.009*
	Too little responsibility at work	0.291
	I am overqualified for the job	0.047*
	Little opportunity for promotion	0.016*
	I pretend to be busy	0.995
Advancement constraints	I am not encouraged to work more	0.378
	Limited opportunity for career advancement and pay raise	0.002*
	Gender / age discrimination	0.267
	I am not fit for the job I do	0.000*
	Work means nothing to me personally	0.007*
My work goes unnoticed	My work goes unnoticed	0.049*
		0.303

* significant difference between specialists in occupational health in private practices and healthcare centres (P<0.05)

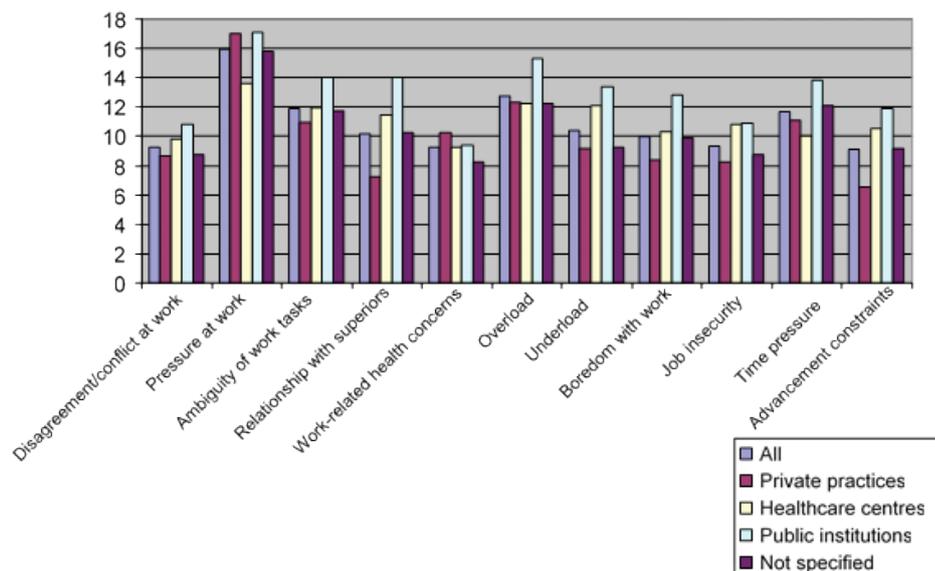


Figure 2 Stress aspect (stressor) scores in specialists in occupational health by organisational structure

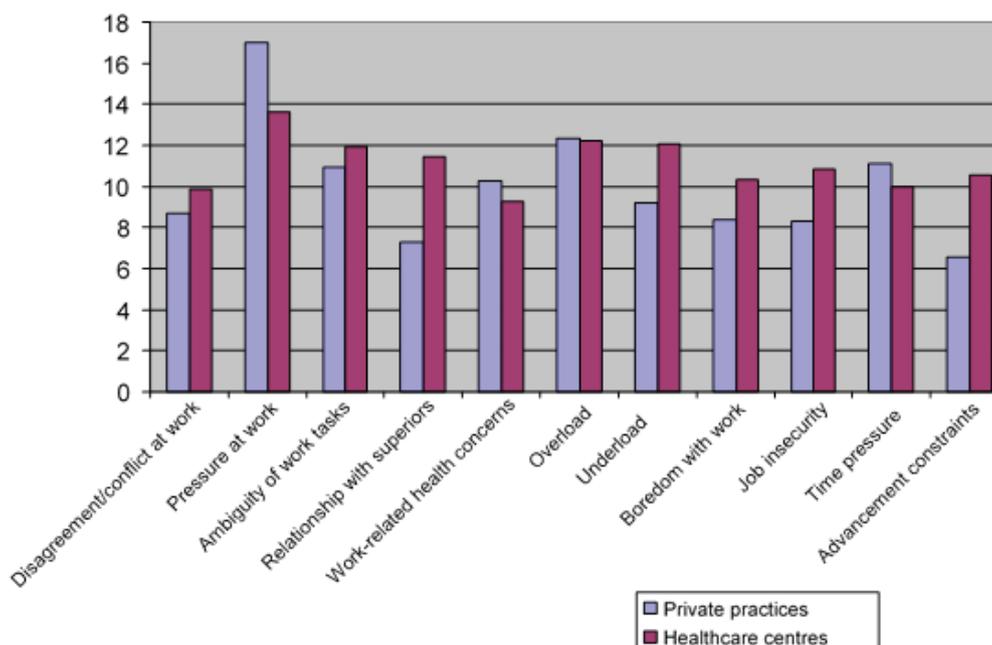


Figure 3 Stress aspect (stressor) scores in specialists in occupational health working in private practices (outpatient clinics) and community healthcare centres

in HCs reported limited opportunity for promotion and pay raise, gender and age discrimination, no acknowledgement of their work, and no personal satisfaction with their work. In other words, HCs turned out to be the least demanding and therefore the least stimulating organisations. In contrast, private occupational health practices seem to provide best opportunity for improvement in work design, which is in line with earlier reports (19).

CONCLUSION

In conclusion, our pilot study gives a glimpse at work-related stress among occupational health physicians, which has poorly been investigated or documented in Croatia in recent time. Its findings may be of some value for SOHs engaged in training programmes as examiners and educators. The observed differences in stressors with regard to organisational structure call for further improvement of the questionnaire and for continued investigation that could give a better insight into the role of various stressors in work efficiency and satisfaction among SOHs.

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Stres povezan s poslom u specijalista medicine rada u Hrvatskoj – pilot-istraživanje

Cilj ovoga istraživanja bio je procijeniti psihosocijalne rizike na radnome mjestu u skupini 70 specijalista medicine rada koji su anketirani upitnikom, osmišljenim 2016. godine u Hrvatskom zavodu za zaštitu zdravlja i sigurnost na radu. Rezultat od prosječnih 119,7 bodova ($\pm 28,9$; raspon: 38 – 175) od maksimalnih 275 bodova upućuje na srednju razinu stresa. U osamnaest ispitanika zabilježena je visoka razina stresa (>135 bodova). Najistaknutiji i jedini stresor koji je zabilježen u slučajevima visokoga stresa bio je pritisak na poslu, osobito administrativni poslovi te istovremeno obavljanje više poslova. Nakon što su ispitanici podijeljeni u tri skupine prema vrsti organizacije u kojoj su zaposleni, dobiveni rezultati pokazali su da specijalisti medicine rada zaposleni u javnim ustanovama imaju najvišu razinu stresa (u prosjeku 143 boda). Oni su navodili golem pritisak na poslu, preveliko radno opterećenje i lošu komunikaciju s poslodavcima, uz nedostatak potpore nadređenih. Specijalisti medicine rada zaposleni u medicinskim centrima i privatnim poliklinikama također su izloženi povećanom pritisku na poslu. Zaposlenici privatnih ustanova nisu istaknuli probleme u odnosu s nadređenima, a specijalisti zaposleni u medicinskim centrima navode premalo radno opterećenje i zapreke u napredovanju na poslu. Razlike u odnosu s nadređenima te neslaganja i konflikti na poslu odraz su različite organizacije rada, što je potvrđeno dodatnom analizom podataka po podskupinama. Rezultati ovoga pilot-istraživanja mogli bi koristiti specijalistima medicine rada koji su uključeni u obrazovne programe u ulogama ispitivača i edukatora. Ujedno, oni upućuju na potrebu za poboljšanjem upitnika i nastavkom istraživanja koja bi mogla dati bolji uvid o ulozi različitih stresora na učinkovitost i zadovoljstvo na poslu u specijalista medicine rada.

KLJUČNE RIJEČI: liječnici; psihosocijalni rizici; stres povezan s poslom; upitnik