

## OPTEREĆENJE U VRATU, RAMENU I RUCI ZAPOSLENIH U VISOKOJ ZDRAVSTVENOJ ŠKOLI PRI RADU ZA RAČUNAROM

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**Sažetak.** Problemi sa bolovima, parestezijama, slabošću mišića vrata, ramena i ruku česti su kod osoba koje rade sedeći posao i u radu koriste računar, a razlog su odsustvovanja sa posla zbog bolovanja. Ovi problemi ukazuju na potrebu za različitim personalnim i ergonomskim adaptacijama radnog mesta, bilo da su u pitanju kabineti/učionice, ili rad za računarom u kancelariji. Istraživanje je počelo u letnjem semestru školske 2024/25.g. uz saglasnost rukovodioca odseka Visoka zdravstvena škola i odobrenje Etičkog odbora. Obuhvatilo je 71 nastavnika u stalnom radnom odnosu i 24 ispitanika iz službe stalno zaposlenog nenastavnog osoblja koje u radu koristi računar. U istraživanju je korišćena prilagođena verzija upitnika Maastricht Upper Extremity Questionnaire – MUEQ. Cilj rada je da se prepoznaju problemi i da se eventualno predloži i organizuje obuka zaposlenih zaštitnim položajima i pokretima kojima se mogu olakšati tegobe i smanjiti opterećenje. Rezultati pokazuju da su najčešći simptomi umor i iscrpljenost u rukama (48% nastavnog i 63% nenastavnog osoblja), dok su parestezije i slabost nešto ređe, ali prisutne kod značajnog broja ispitanika. Statistički značajne razlike u distribuciji bola između grupa nisu potvrđene, ali je primećeno da nenastavno osoblje provodi više vremena za računarom i češće prijavljuje slabost i umor u rukama. Samo 28% ispitanika koristi ergonomska pomagala ili preventivne položaje. Zaključuje se da su tegobe gornjih ekstremiteta značajno zastupljene kod zaposlenih u visokom obrazovanju, uz nedovoljnu primenu ergonomskih strategija. Dobijeni nalazi ukazuju na potrebu za organizovanjem edukacije o zaštitnim položajima i pokretima, kao i za unapređenjem ergonomskog dizajna radnog mesta, čime bi se smanjilo opterećenje i unapredilo zdravlje i radna sposobnost zaposlenih.

**Ključne reči:** bol u ramenu, vratu, ruci; zaštitni položaji i pokreti; ergonomsko prilagođavanje

## **BURDEN IN THE NECK, SHOULDER AND HANDS OF EMPLOYEES IN COLLEGE OF HEALTH SCIENCES WHILE WORKING AT THE COMPUTER**

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**Abstract.** Problems with pain, paresthesia, and weakness of the neck, shoulder, and arm muscles are common among people who have sedentary jobs and use computers at work, and are the reason for absences from work due to sick leave. These problems point to the need for different personal and ergonomic adaptations of the workplace, whether it is about offices/classrooms, or working at a computer in the office. The research began in the summer semester of the 2024/25 school year. with the consent of the head of the department of the College of Health Sciences and the approval of the Ethics Committee. It included 71 full-time teachers and 24 respondents from the service of full-time non-teaching staff who use a computer in their work. The research used an adapted version of the Maastricht Upper Extremity Questionnaire – MUEQ. The aim of the work is to recognize the problems and to possibly propose and organize the training of employees in protective positions and movements that can ease the discomfort and reduce the burden. The results show that the most common symptoms are fatigue and exhaustion in the hands (48% of teaching and 63% of non-teaching staff), while paresthesias and weakness are somewhat rarer, but present in a significant number of respondents. Statistically significant differences in the distribution of pain between the groups were not confirmed, but it was observed that non-teaching staff spend more time at the computer and more often report weakness and fatigue in the hands. Only 28% of respondents use ergonomic aids or preventive positions. Conclusion is that upper extremity complaints are significantly present among employees in higher education, with insufficient application of ergonomic strategies. The obtained findings point to the need to organize education on protective positions and movements, as well as to improve the ergonomic design of the workplace, which would reduce the workload and improve the health and work ability of employees.

**Key words:** pain in the shoulder, neck, arms; protective positions and movements; ergonomic adjustment