female gender (OR = 1.61, \( P < 0.001 \)) and life satisfaction level (OR for range = 7.73, \( P < 0.001 \)).

**Conclusions:** The prevalence of self-reported headache among high school children in Zagreb city is relatively high; significant sex difference was observed. Pain among children and adolescents is an important public health problem.

**43 Management of patients with headache presenting to a neurological emergency room**

V. Vuković, M. Knežević-Pavičić, J. Tumpić-Jaković, M. Strineka, A. Lovrenčić-Huzjan, & V. Demarin

1University Hospital "Sestre Milosrdnice", Department of Neurology, Zagreb, Croatia, 2General Hospital Našice, Department of Neurology, Našice, Croatia, 3General Hospital Virovītica, Department of Neurology, Virovītica, Croatia

**Introduction:** Patients with headache frequently seek help in a neurological emergency room. In this study we tried to analyse the management of patients presenting with a headache to the emergency room (ER) at the University Hospital "Sestre milosrdnice" in Zagreb.

**Methods:** We have retrospectively analysed all patients with headache who were examined in our emergency room during 2007. Patient data were analyzed according to the diagnoses, diagnostic procedures, treatment and further referral.

**Results:** Among 6225 patients, 1385 (22.3%) complained of headache; 894 (64.9%) women and 491 (35.4%) men. Migraine with or without aura, tension-type headache or cervicogenic headache had 1009 (72.9%) of patients (67.3% women and 32.7% men); 84 (6%) had intracranial haemorrhage, 33 (2.3%) had primary tumour, 54 (3.8%) metastases, 193 (13.9%) head trauma, 7 (0.5%) head trauma with haemorrhage and 5 (0.4%) had an infective disease. A diagnostic procedure was indicated in 413 (29.8%) of patients: 314 (22.7%) had a CT scan, 85 (6.1%) an EEG and 70 (5%) had an ultrasound examination. Patient referral was as follows: 1022 (73.8%) was dismissed home, 222 (16%) was referred to other clinics and 141 (10.2%) was hospitalized. Among patients with primary and cervicogenic headaches a diagnostic procedure was performed in 235 (23.2%) while 45 (4.5%) was hospitalized.

**Conclusions:** Patients with primary headaches frequently seek help in the ER. For patients with primary headaches, better treatment should be provided by GPs and neurologists (headache specialists) in out-patient headache clinics. Mass media campaignes should be provided by GPs and neurologists (headache specialists)

**45 Median nerve dimensions measured using high-resolution ultrasound in healthy volunteers**


University Department of Neurology, Sestre Milosrdnice University Hospital, Reference Center for Neurovascular Disorders and Reference Center for Headache of the Ministry of Health and Social Welfare of the Republic of Croatia, Vinogradska 28, Zagreb, Croatia

**Objectives:** Although electroneuro- and electromyography are still leading diagnostic methods for investigation of peripheral nerves function, they do not provide information regarding their morphology. This study was conducted to evaluate the suitability of ultrasonography in visualization of median nerve in healthy volunteers.

**Methods:** Twenty-five asymptomatic volunteers (16 women and 9 men) have participated in this study, age ranging from 20–68 years. Device used was Aloka Prosound Alpha10 Premier with 13MHz probe, using custom preset for musculo-skeletal sonography. Following dimensions of median nerve at the level of pisiform bone were measured bilaterally: cross-sectional area (CSA), circumference, longer and shorter radius. Subsequently, using latter values, flattening ratio was calculated.

**Conclusion:** There was no significant difference in BHI values during orthostatic stress in evaluation of cerebrovascular reactivity.