

EDITORIAL

Dear Readers, Contributors and Friends,

The issue which is just being introduced to you contains as many as 16 papers, including 1 review and 15 original articles.

To encourage all concerned to read this interesting issue, please find below a short summary of the contents.

The issue opens with an extensive review of health effects of polybrominated diphenyl ethers (PBDEs) used as flame retardants in many consumer products, based on animal and human studies. The authors, M. Czerska et al. from Nofer Institute of Occupational Medicine in Łódź, Poland, focus their attention on thyroid hormone, neurodevelopment and fertility. The results of the research reveal some disturbances in thyroid hormone system that may result in hyperthyroidism with its long-term consequences, e.g. reduced weight of reproductive organs and lower levels of sex hormones associated with PBDE serum concentrations; it has been also found that exposure to PBDEs during pregnancy may cause slower mental and psychomotor development in infants. It should be borne in mind, however, that in spite of those adverse health impacts, PBDEs are effective in protecting people from the destructive power of fire.

The paper beginning the section of original papers by A. Buja et al., Padua University, Italy, is devoted to strain and health implications of nurses' shift work. The cross sectional questionnaire study involving 806 nurses indicated an association between night shifts and certain self-reported gastrointestinal (gastric pain, obstipation), stress-related (exhaustion, tiredness) and musculoskeletal (back pain) symptoms.

The next paper by B. Peplowska et al. (Nofer Institute of Occupational Medicine, Łódź, Poland) is aimed to

characterize night shift work and occupational co-exposures in industrial plants, with particular focus on potential carcinogens. Three shifts within a 5-day cycle proved to be the most frequent system of work, and in none of the enterprises the night shift was a single exposure; instead, it was accompanied with numerous hazardous agents with noise, carbon monoxide and formaldehyde as the most common ones; out of these hazards, 11 agents have been classified by IARC to group 1 – carcinogenic to humans.

The effects of some life style factors and diet on mortality of men with documented physical fitness is discussed by J. Śmigielski et al. from Medical University of Lodz, Poland. The analysis of results obtained from the sample of 204 men, aged 30–59, with physical effort evaluated by means of the bicycle ergometer and the maximal oxygen uptake showed lower risk of death in the subjects reporting regular consumption of yellow cheese and higher in those who ate beef/pork meat; the level of physical fitness did not significantly influence mortality (see also an earlier paper of the same authors on similar subject published in *IJOMEH* 2013;26(3):337–48).

S. Al-Azzam et al. from Jordan University of Science and Technology, Irbid, Jordan, present the results of an audit on public awareness of depression symptoms in their country. A self-administered questionnaire filled by ca. 5000 individuals revealed an acceptable level of awareness; majority of respondents thought that depression was a treatable condition that could affect patient at any age; unemployment and poverty were found to be the most recognized risk factors.

Association between job strain (high demand – low control) and cardiovascular disease risk agents among petrochemical industry workers is reported by S. Poorabdian et al.,

Esfahan University of Medical Sciences, Iran. In their cohort study of 500 randomly selected males, the findings in terms of statistic qualitative and quantitative variables reveal that job control and demand were significantly related to heart disease risk factors including hypertension, hyperlipidemia and cigarette smoking.

Another paper by I. Gómez-Acebo et al. from University of Cantabria, Santander, Spain, reports an outbreak of non-specific building-related symptoms which occurred in health care workers (HCW) in one (Residencia Cantabria – RC) of the main hospital buildings. HCW complained of bad odor in several floors, eye and throat irritation, burning sensation on the skin, tongue ulcerations and other ailments, similar to those involved in the sick building syndrome (SBS). The authors identify the cause of the RC disease, characterize the perceived indoor environment quality in RC and propose possible measures of prevention.

Sex differences in psychosocial work dimension (demand and control), personality and body mass index (BMI) are discussed by A. Blanch and A. Aluja from University of Lleida and Institute of Biomedical Research, Lleida, Spain. The results of their self-report questionnaire study of 322 female and 184 male full-time employed respondents proved that the main effects of personality variables were not significant, physical workload interacted with neuroticism for males, whereas control influenced activity in the females. The conclusion is that psychosocial work dimensions and personality characteristics are related to Body Mass Index for men and women.

The links between empathy, emotional labor and emotional exhaustion in the sample of 168 teachers were examined by M. Wróbel from University of Lodz, Poland. The findings of this interesting study present a valuable insight into the role of empathy and emotional labor in the development of teacher burnout and confirm that deep acting and negative mood induction mediate the relationship between empathy and emotional exhaustion.

The problem of burnout is raised also by B.A. Basińska (Gdańsk University of Technology, Poland) and E. Wilczek-Rużyczka (Andrzej Frycz Modrzewski, Kraków University, Poland), who studied the role of individual rewards and demands in burnout among surgical nurses. It turned out that excessive demands and deficiency in respect and esteem together with job promotion and salary are main reasons for burnout and frustration.

The next paper by K. Ghilan et al. (Sana'a University, Sana'a; Kuwait University, Kuwait, Yemen) also concerns the nurses, namely the prevalence of low back pain (LBP) in this occupational group. The questionnaire study of 687 respondents indicated that LBP was common among female nurses and affected to 60% of the subjects, and menstrual disorders seem to contribute to developing LBP.

The study on job postures and musculoskeletal disturbances (MSDs) carried out among 65 dentists is reported by E. Rafeemanesh et al. from Mashhad University of Medical Sciences, Mashhad, Iran. The prevalence of MSDs for different body parts was 75% for the neck, 58.6% for shoulders and 44.8% for the wrist, and the major reason for job absenteeism was back pain; the findings indicate a need of corrective measures in job postures and the necessity to reduce working hours.

The prevalence of low back pain (LBP) among farmers was investigated by B.A. Tella et al. from University of Lagos, Nigeria. The 12-month prevalence of LBP among 604 subjects was 74.4% and was significantly affected by age, sex and years of involvement in farming.

H.-P. Hutter et al. (Center for Public Health, Medical University, Vienna, Environmental Agency, Austrian Institute for Healthy and Ecological Building, Medicine and Environmental Protection, Vienna, Austria) come up with an assessment of the relationship between school indoor air pollutants and cognitive performance in elementary school children aged 6–8 years. The analysis showed significant correlations of tris (2-chlorethyl)-phosphate (TCEP) in school

dust and suspended particulates (PM₁₀, PM_{2.5}) with cognitive function; the latter decreased with increasing concentrations of TCEP. The authors recommend a prohibition of the use of toxic chemicals like e.g. semivolatile compounds in childrens' environments.

The contents is closed with two toxicological research papers with experiments on rats, both by R. Świercz et al. from Nofer Institute of Occupational Medicine, Łódź, Poland.

The first experiment was intended to compare the effects of chlorfenvinphos (CVP) – the rise of the plasma corticosterone (CORT) concentration and the reduction in cholinesterase (CHE) activity – in metyrapone (MET) treated and MET untreated rats. The results suggest that MET treatment may ensure a significant

protection against some effects of organophosphate poisoning.

Toxic effect in the lungs of rats after inhalation exposure to benzalkonium chloride (BAC) was pointed out in the next experimental study by R. Świercz et al. It was found that BAC inhalation induced a strong inflammatory response and a damage to the blood-air barrier, while histopathological examinations revealed a number of pathological changes only in the lungs.

So much for the summary of the contents.

We wish you a good time reading *in extenso* all papers.

*Prof. Wiesław J. Sułkowski
on behalf of the Editorial Board*