result to psychosocial and psychosomatic imbalances such as stress, sleep disorders, myoskeletal dysfunctions, cardiovascular diseases, work injuries, burn outs, violence outbursts at work and higher mortality rates. The abovementioned consequences on the working individual/group, inevitably reflect back to the short/long term “health” of the Industry, because of increased absenteeism, negative reputation, productivity fall and deterioration of product quality. The purpose of the present research is to present the results of a field study conducted in the City of Athens (Keratsini Municipality –Drapetsona Municipality) and it concerned the employees’ viewpoints regarding the impact of the implementation of the “Kallikratis Plan” program on the working environment and the resulting consequences on the psychosocial and psychosomatic condition of the working individual/group.

Methods One-way-Analysis of Variance and Multiple Regression Analysis were used for data reduction and identification of consistent data features.

Results The data showed that 30.3% of the employees confirmed that they increased their smoking and the 11.9% confirmed that they increased their alcohol use, within two years after the implementation of “Kallikrates Plan”. Additionally, there are statistically important differences concerning psychosocial inconvenience ($p = 0.01$), interpersonal relationships ($p = 0.03$), anxiety ($p = 0.01$) and burn out ($p = 0.00$) within several administrative municipality departments, such as Administration Department, Technical Department, Social Services and Cleaning services. Employees complain mainly about work overload, time pressure per assignment and intensification of work. Nevertheless, married and educated employees displayed lower levels of stress and anxiety.

Conclusions Results indicate a negative influence on employees’ health parameters which may result to possible deterioration of the working individual’s/groups’ condition and well-being.

Results also indicate that education/training of employees in their new duties is needed. Furthermore, training towards a healthier life style for smoking cessation and drinking control is also needed, as well as in some cases psychological support and coaching could also be necessary.

1001 FLOTATION NON-WEARING AND WEARING IN OCCUPATIONAL BOATING FATALITIES, CANADA 1991–2010

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Background Flotation wearing is low among Canadian boating fatalities. The study ascertained trends and factors associated with non-wearing of flotation among occupational boating victims in Canada, and compared with recreational victims.

Methods Annual Red Cross collection of 1991–2010 Canadian coroner data by structured questionnaire. Analysis included activity, purpose, personal, equipment, environment factors, trends.

Results There were 10,511 water-related deaths, 9,961 from immersion including drowning and cold, 513 trauma, and 37 other injuries. Excluding land and air transport, 37% of immersions involved boating. 12% ($n = 366$) of 3324 boating deaths involved occupation and 85% recreational or daily life. Occupational boating immersions included 297 drownings, 53 drownings with hypothermia, 5 deaths due to hypothermia complicated by drowning, and 11 hypothermia deaths. At least 55% involved

very cold water less than 10 °C. 62% were commercial fishing and 14% marine shipping; 9% of fishers and 12% of shipping victims were properly wearing a flotation device. Overall, 11% were properly wearing, 2% improperly wearing, and at least 35% not wearing flotation, possibly more since flotation was unknown for 38%. For 9% flotation was absent in the boat, and for 55% unknown. Range of boats in violation of current regulations, with no flotation, ranged from 9 to 64%, with many unknowns. Incidents included 31% capsizes, 27% falls overboard, and 25% swamping; only 5% dying falling overboard wore flotation, 9% in capsizes, 17% in swamping. There was no trend in non-wearing during surveillance. Most deaths occurred in Nova Scotia, British Columbia, and Newfoundland/Labrador. Numbers of deaths declined from 246 during 1991–2000 to 120 during 2001–2010. For recreational deaths, a flotation device was worn properly by 12%; in $\geq 50\%$ flotation was absent, representing violation of current regulations requiring in boats, even if wearing is not required.

Conclusions While occupational deaths have declined, for various reasons, non-wearing of flotation among victims remains high. Legislation on wearing varies and is left to discretion of the operator. Review of various boating interventions has found the greatest effectiveness to be legislation mandating wearing, coupled with effective enforcement. Hypothermia protective garments may also be required in cold water conditions, frequent in the Canadian context, especially for occupational boating.

Safety Culture

Post Wed 3.9

1002 TRAINING AND INVOLVEMENT OF MEDICAL STUDENTS FROM ROMANIA IN THE FIELD OF INJURY PREVENTION AND SAFETY PROMOTION

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Background The medical curriculum and involvement of undergraduate students in injury prevention and safety promotion can play an important role in increasing awareness of its importance and in equipping students with appropriate knowledge and skills regarding this issue. This paper focuses on the situation encountered at the University of Medicine and Pharmacy from Cluj-Napoca, Romania which prepares for medical profession both Romanian students which are taught in Romanian (Romanian section) and students from other countries which are taught in English (English section).

Objectives This study presents data regarding medical curricula and involvement of Romanian undergraduate medical students with respect to the following areas of injury prevention and safety promotion: 1.research 2. development, implementation and evaluation of educational programs and campaigns 3. emergency medical services 4. capacity building, cooperation and leadership.

Results There are several strengths which should be pointed out such as training of medical students regarding first aid and management of different types of accidents, as well as their involvement in extracurricular activities in the field of emergency medical services. Even to a less extent, they receive also training in the field of prevention of injuries and development of

educational activities; some of them are also involved in volunteer activities regarding education of children and adolescents for injury prevention and safety promotion, such as programs developed by the Organisation of Medical Students or the Department of Community Medicine from the university. Training and involvement in the field of research, capacity building and cooperation have several weaknesses, but examples of some activities of research developed by few medical students can be also presented.

Conclusions The presentation underlines the strengths and weaknesses and makes recommendations for future improvements regarding the presented issues.

1003 GROUP AND ORGANISATIONAL SAFETY CLIMATE IN THE FIRE SERVICE: PSYCHOMETRIC PILOT STUDY RESULTS

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Objectives Research related to safety climate in fire service organisations is limited. The researchers initiated a large-scale safety climate study in the fire service in the eastern and western United States.

Methods The researchers have completed extensive qualitative research to identify and refine the dimensions of safety climate in the fire service and to refine the model guiding the research. Pilot data were collected from 208 firefighters in Georgia. Psychometric analyses were completed to assess reliability and validity.

Results Psychometric analyses identified reliable scales. Group-level factors derived include supervisor support ($\alpha = 0.91$), vertical cohesion ($\alpha = 0.92$), and horizontal cohesion ($\alpha = 0.94$). Key organisational factors derived include management commitment ($\alpha = 0.95$) and programs/policies ($\alpha = 0.95$). Other organisational factors included human resource management ($\alpha = 0.85$) and incident command ($\alpha = 0.92$). Safety behaviour scales were also derived, including safe work practices ($\alpha = 0.79$), personal protective equipment use ($\alpha = 0.85$), safety citizenship behaviour ($\alpha = 0.96$), safety voice ($\alpha = 0.87$) and employee rights and responsibilities ($\alpha = 0.79$). Correlations between these latent factors were mostly highly significant. The only relationships not significant were between human resource management and safety citizenship behaviour and human resource management and personal protective equipment.

Discussion Research within fire service organisations has been limited. This novel work provides some initial exploration into safety climate factors within the American fire service. The initial factors, which were psychometrically determined and analysed, provide initial guidance for future safety climate research in the fire service and provide information that practitioners can use to explore safety climate within fire and emergency service organisations.

1004 KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING WORK SAFETY CULTURE AMONG STAFF IN A PUBLIC UNIVERSITY IN MALAYSIA

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Background Safety culture of an institution is the reflection of actions, attitudes and behaviour of its members concerning safety. A good safety culture in an academic institution impacts on the quality of work and improves organisational performance. This paper aims to explore the knowledge, attitude and practice (KAP) on work safety culture (WSC) among a sample of academic and non-academic staffs in a university in Malaysia.

Methods A cross-sectional study using self-administered questionnaire was conducted among 215 academic and non-academic staffs in a medical faculty in Malaysia.

Results In general, 73.8% have good knowledge regarding WSC, 54.5% reported positive attitude regarding WSC and 74.1% practiced good WSC. Bivariate analysis was performed to examine the association between participants' KAP and several socio-demographic characteristics, as well as employment factors, followed by multivariate analysis to identify the predictors of KAP. Knowledge level on WSC was significantly associated with length of services, where participants who worked for less than eight years reporting better knowledge on WSC compared to their colleague with longer service duration (adjusted odds ratio, AOR = 1.76; 95% confidence interval, CI: = 1.21, 3.53). Positive attitude regarding WSC was significantly associated with being permanently employed compared to temporary employment (AOR = 2.72; 95% CI: = 1.11, 6.64), whereas the practice of good WSC was significantly associated with having good knowledge on WSC (adjusted OR = 4.91, 95% CI: 2.42, 10.75), having good attitude towards WSC (adjusted OR = 2.22, 95% CI: 1.07, 4.62) and being married (adjusted OR = 2.64, 95% CI: 1.13, 6.16).

Conclusions This study concludes that good knowledge and positive attitude being important factors in determining good safety practice among the participants. While employment characteristics have shown significant association with knowledge and attitude, these did not determine the participants' practice on WSC. Therefore, appropriate education and safety promotion need to be given to all members of the faculty regardless of their socio-demographic and employment status to ensure optimum safety practices in the organisation.

1005 PREVENTION OF ACCIDENTS IN SMALL AND MEDIUM ENTERPRISES (SMEs) IN DELHI CITY OF INDIA

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Background Great efforts are directed towards the advancement of Small and medium Enterprises (SME) in developing countries. SMEs are considered as the driving force for the economic growth of a developing country like India. According to WHO, over 1000 million people worldwide are employed in SME industries. In India about 70% workforce are working in SMEs of unorganised sector. It provides employment for both men and women, mainly those from the lower socioeconomic classes.