

The role of multi-disciplinary team work was a key factor in this practice development project.

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#### CORE COMPETENCIES IN OCCUPATIONAL MEDICINE IN BRAZILIAN PROCESSES FOR SPECIALIST EDUCATION, CONTINUOUS EDUCATION AND CERTIFICATION

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**Introduction** The core competencies required for occupational physicians (OP) need to be adapted continuously evolving around the world. Since 2002 the Brazilian National Association of Occupational Medicine (ANAMT) is guiding the training and certification processes, quite similar to other Occupational Health Associations in the European Union or in some other individual countries around the world. The aim of this study was to describe the process and the results of a Brazilian assessment, to actualize existing data, seek consensus and identify the common core competencies required for OP nowadays.

**Methods** A modified Delphi study was carried out among 223 OP's, associate members of the ANAMT. The study was conducted in two rounds (round 1: rating of the principal competency domains; round 2: ranking) using a questionnaire based on the specialist training syllabus of different countries, expert panel reviews and conference discussions.

**Result** There was broad consensus on all identified competency domains with scores of 90% and over in every domain. In the first step the results were organised in six domains, 24 general competencies and 124 specific competencies. The competency to act ethically and professionally was considered as core around which the four basic domains are organised: analysis and intervention on the health condition; study of working conditions and proposals for improvement; integrated health management; safety, environmental and health promotion and education. The sixth domain, considered as transversal to the others, includes skills in communication, interpersonal relations, teamwork and leadership as well as knowledge management. In the second round of the study, this competency cast was reorganised and hierarchized, resulting in 4 main domains and 60 specific competencies.

**Discussion and conclusions** This study has established the current priorities amongst Brazilian OP's concerning the core competencies required for OH practice and the results seem in concordance with similar studies conducted worldwide. These findings can serve as a platform for the qualification processes for medical residence/specialisation trainings and specialist certification.

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#### INDUSTRIAL WELFARE NURSE COURSES IN HUNGARY BETWEEN 1933 AND 1945

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**Introduction** Occupational Health Nursing aims at securing the health, safety and well-being of the workforce. The purpose of this presentation is to introduce the origin of specific education for the occupational health nurses, which fell into oblivion by this time.

**Methods** The research method was a holistic data gathering in which printed and online available archival, literature, legal sources and press-material between 1883 and 1950 were explored. A search of the electronic databases was concluded, using the keywords 'nursing', 'history', 'education' and 'teaching'. Content analysis using bibliometric and historical research methods on available documentation sources.

**Results** The idea of the training of Industrial Welfare Nurses developed by Dr Mária Balogh (1895–1970?) secondary school teacher. The first factory-nurse course has been started in 1933 in Budapest, Hungary. Participants of the course had to suit strict admission requirements. The two-years full-time (45 hours/week) training covered four major fields: health, social, legal and cultural studies. The Minister of Industry supported the development of the institutional system of factory nurses from 1935. There are data available with reference to the uninterrupted existence of training until 1945; according to these more than 150 women obtained a qualification. Requirements of taking up an OH nurse job were regulated by law from 1941.

**Conclusion** It has been stated that OH nurse education has an 85-year-old history in Europe that throw new light upon theories until now about origin of OH nursing education.

## Emergency Preparedness and Response in Occupational Health

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#### EMERGENCY PREPAREDNESS AMONG THE FARM WORKERS WHILE PERFORMING THE FARM ACTIVITIES DURING SUMMER MONTHS

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**Introduction** India being mainly an agricultural country, economy and further its growth purely depends on farming, making agriculture as most preferred occupation nationwide. The exposure of farm workers to this extreme weather condition especially during the summer months (March-June) is just hampering their health. Worsening of health is more prominent because most of farm activities are carried out manually under direct heat exposure and lack of awareness among the farm workers regarding the health hazards and even the unavailability of the protective methods. The combination of manual farm activities and heat exposure is a health, environmental and occupational issue, which need serious concern. The study focused on finding out the adaptive methods adopted by the farm workers.

**Methods** The study was undertaken to find out the adaptive methods adopted by the farm workers while accomplishing the farm activities during month of March to June and develop PPE to protect them from heat stress.

**Results** It was revealed that 98.9 percent of the farmers increased daily water intake, whereas, 27.8 percent increased liquid diet in their daily food intake. Regular intake of the

herbal coolant was also very prominent among them, such as *jal jeera*, mint, cucumber, onion garlic, lemon water, curd, etc., as these coolants were easily available to farmers. With reference to clothing habit wearing loose cloth was only adopted by 47 percent. The data regarding the protective methods to be adopted while performing the farm activities, it was revealed that sunglasses, hat, gloves, umbrella scarf etc. were least adopted by them due to their poor feasibility while performing the task.

**Conclusion** Thus, with the pace with which global average temperature is rising, emergency preparedness is very important among outdoor workers in order to keep themselves protected from heat stress. Creating awareness and developing PPE to safeguard is important.

### 1638 THE ENVIRONMENT AND HEALTH

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**Aim** This session looks at the environment and the workplace as contiguous entities and as such having many shared influences.

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### 1638a WORK RELATED MUSCULOSKELETAL DISORDERS, PHYSICAL WORK FACTORS AND PSYCHOSOCIAL WORK FACTORS FOR CHARTERED PHYSIOTHERAPISTS, PHYSICAL THERAPISTS AND ATHLETIC THERAPISTS IN IRELAND

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**Introduction** In the epidemiological literature, physical exposure and psychosocial work factors are now recognised as major contributing work environmental factors for work-related musculoskeletal disorders (WRMSDs). Healthcare workers such as physiotherapists and physical/athletic therapists are exposed to risk factors for WRMSDs on a daily basis, despite having specialist knowledge of body mechanics and injury prevention strategies.

**Methods** A cross-sectional study 'Health in Hand-Intensive Tasks and Safety' (HITS). Study sample consisted of 347 employed and self-employed practising therapists in Ireland. Postal questionnaires included questions about WRMSD symptoms, physical work risk factors, psychosocial and work organisational risk factors, among others. Analyses included logistic regression modelling.

**Results** 55.4% reported that they had experienced WRMSD that lasted for more than 3 days in the past 12 months. The highest physical effort perceived was repetitive thumb movements (mean=5.08) and the lowest was bending the elbows

(mean=3.5). Many affected therapists classified the following physical work factors as 'majorly significant' in negatively contributing to their musculoskeletal health, the repetitiveness of work motions (54.6%) and high quantitative workload due to treating many patients/clients (49.7%). In relation to psychosocial work factors, most therapists scheduled their appointments themselves (65.7%). The odds of upper limb symptoms more than doubled (OR=2.3, 95% CI) for those not booking their appointments. Social support emerged as an important issue for both the 12 month prevalence of any upper limb symptom and the prevalence of incapacitating symptoms. The level of self-reported influence at work and predictability of work were significantly associated with incapacitating symptoms after adjustment for confounders.

**Conclusion** The results suggest that therapist input into scheduling of clients/patients and supervisory support may be crucial to their musculoskeletal health. For employed therapists, social support is provided from colleagues and direct supervisors, however, for self-employed therapists social support has to take other forms, through the professional bodies and other organisations.

### 1638b THE FOOD CHOICE AT WORK TRIAL: FROM EVALUATION TO COMMERCIALISATION AND PRACTICAL APPLICATION IN EVERYDAY WORKPLACE SETTINGS

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**Introduction** The surrounding environments in which individuals live and work influences their health behaviours. Macro and micro-level modification of these environments is an important catalyst for behaviour change. However, evidence on effective workplace dietary interventions is limited. The FCW trial assessed the comparative effectiveness of a workplace dietary intervention involving nutrition education and system-level dietary modification both alone and in combination versus a control workplace on employees' dietary intakes, nutrition knowledge and health status. An economic evaluation assessed the cost-effectiveness of the FCW intervention from the perspective of healthcare providers in terms of QALYs and employers in terms of monetary benefits (reduced absenteeism).

**Methods** Four manufacturing workplaces in Ireland were allocated to control, nutrition education (Education), system-level dietary modification (System-level) and nutrition education and system-level dietary modification (Combined). Nutrition education included group presentations, individual consultations and detailed nutrition information. System-level dietary modification included menu modification, fruit price discounts, strategic positioning of healthier alternatives and portion size control. Data on dietary intakes, nutrition knowledge, health status, QALYs and absenteeism were obtained at baseline and at 7–9 months follow-up. Multivariate analysis of covariance compared changes across the groups. The economic evaluation included cost-utility and cost-benefit analyses.

**Results** Follow-up data were obtained for 541 employees (18–64 years) (64% of 850 recruited). There were significant positive changes in intakes of saturated fat ( $p=0.013$ ), salt ( $p=0.010$ ) and nutrition knowledge ( $p=0.034$ ) between baseline and follow-up in the combined intervention versus the control. Significant changes in BMI ( $-1.2 \text{ kg/m}^2$  ( $p=0.047$ )) were also observed in the combined intervention. System-level