

and to nuclear fallout, but relationship between occupational exposure to IR and thyroid pathologies still remains unclear.

**Methods** We ran a cross-section study to investigate whether healthcare workers routinely exposed to low-level IR had a higher prevalence of thyroid diseases. After giving written consent, 285 exposed workers (168 more exposed or 'A category' and 117 less exposed or 'B category') and 599 non-exposed were enrolled during routine examination at the Occupational Health Unit, programmed to monitor their health status. All subjects worked in the same university hospital and lived in the same geographical area of mild iodine deficiency. They were interviewed to fill in an anamnestic questionnaire (concerning to lifestyles, weariness habits and thyroid diseases risk factors) and underwent a physical examination, serum determination of fT3, fT4 and TSH, US neck scan and fine needle aspiration biopsy. Statistical analysis was performed using adjusted prevalence ratio (adPR) with software STATA 14.

**Results** Prevalence of thyroid diseases resulted statistically higher in exposed workers compared to controls (37% vs 30%, adPR 1.63; 95% CI: 1.34 to 1.97). In particular, thyroid nodularity prevalence in exposed group was about twice as higher than controls (28% vs 14%; adPR 2.67; 95% CI: 2.03 to 3.50). Any statistical association was found between IR exposure and malignant thyroid neoplasms (adPR 0.74; IC95% 0.18–3.02). At multivariate analysis, female gender, age and familial history of thyroid diseases were significant risk factors.

**Discussion** In our study, mildly IR exposed health workers had a statistically higher thyroid diseases prevalence than control group, even though no difference was found between A and B categories. Results likely are due to closer and more meticulous health surveillance program carried out in IR exposed workers, allowing to identify thyroid alterations earlier than non-exposed health staff.

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### STAFF COUNSELLING AND CONSULTATION IN AN ACUTE HOSPITAL SETTING. THE VALUE OF EVIDENCE BASED PRACTICE

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**Introduction** The Staff Counselling Service (SCS) promotes positive mental health and motivation by providing counselling, consultation, critical incident stress management (CISM) psycho-educational services, and Mindfulness Based Interventions (MBI's) to all staff in an acute hospital setting. An evaluation of the core counselling service commenced in 2016, to gather data on presenting issues and to ascertain the effectiveness of the service.

**Methods** Contextual statistical data such as client occupation, presenting issue, work related presentations (per Health Services Executive Management standards) are recorded and treatment outcomes are tracked via a web based Feedback Informed Treatment (FIT) system. Clients complete an Outcome Ratings Scale (ORS)1 at the beginning of each session to indicate their perception of how they are functioning and complete a Session Ratings Scale (SRS)2 at the end of each session scoring their experience of the session.

1 2000, Scott D. Miller and Barry L. Duncan

2 2000, Scott D. Miller and Barry L. Duncan

**Results** In 2016, 21% of presenting cases were 'Work Related', the remaining 79% were 'Personal' or 'Both' (work and personal). A breakdown of Work Related issues show 33% due to Relationship issues; 21% Support issues; 19% 'CISM'; 16% 'Demands' with the remaining 11% relating to Role, Investigations and Work Injury. The average intake scores indicate that presentations were in line with scores typical for Out Patient Mental Health Settings. Client progress for those still in counselling were 2 times better than no treatment. For those who had completed counselling, progress was 5 times more than no treatment and above average compared to International clients with identical intake scores.

**Discussion** Data suggests that this is an effective counselling service. From a clinical perspective FIT facilitates ongoing collaboration and case review with clients. Low ORS scores can prompt timely onward referral to Occupational Health Physicians, allowing for clear dialogue, referencing measures which are easily understood. Work related presentations appear to support the ongoing provision of SCS interventions as a means of creating greater emotional intelligence and improving relationships.

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### ASSESSING AND MANAGING JOB STRESS IN EMERGENCY DEPARTMENTS: WHICH TARGETS FOR IMPROVEMENT INTERVENTIONS?

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**Introduction** The changes in the organisation of the healthcare system, actually involving the Italian healthcare hospital departments, triggered by the current economic crisis, in addition to ongoing technological innovation and developments in society, increase the exposure of healthcare workers (HCWs) to work related stress (WRS). Emergency Department (ED) workers are particularly vulnerable to WRS as a consequence of specific occupational risk factors typical of ED's healthcare professions.

**Methods** The authors conducted an integrated analysis of stress sentinel indicators and of objective stress factors of occupational context and content areas, among nurses and physicians of three Italian hospital EDs, in accordance to the multidimensional validated tool developed in Italy by National Network for Prevention of Work-Related Psychosocial Disorders. The aim of this observational study was to analyse the level of WRS after improvement interventions implemented by the management staff of EDs which focused on work context factors.

**Results** The assessment of WRS showed that nurses and physicians of the investigated EDs were exposed to a medium level of risk; the improvement interventions aimed at reducing WRS and focused on the following work context factors:

- Function and organisational culture;
- Role within the occupational organisation;
- Relationship at work, resulted significantly effective in minimising the risk of WRS.

**Discussion** In this study the implementation of improvement interventions focused on team development, safety training programs and adoption of the ethics code for healthcare

workers, showed to be an effective and also measurable way to significantly reduce the level of WRS risk at workplace. Head Physicians and Head Nurses of EDs should consider that stress management programs aimed to improve work context factors associated with occupational stress are effective in minimising the impact of WRS on ED workers.

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### THE COMMON SAFETY AND HEALTH HAZARDS AMONG LABORATORY WORKERS IN KALIRO AND IGANGA DISTRICTS, UGANDA

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**Introduction** According World Health Organisation report 2006, health care facilities around the world employ over 59 million workers who are exposed to a complex variety of health and safety hazards during execution of their daily routine activities. This often exposes health care workers in developing Occupational diseases. Health-care workers (HCWs) need to be protected from these workplace hazards in order to have an adequate workforce of trained and healthy health personnel. The main objective of this study was to inspect and find out the common safety and health hazards among the health workers in the laboratories of the main hospitals in the above districts.

**Methods** This study was carried out using Uganda's Occupational Safety and Health check list which was administered to 33 respondents working in laboratories of the main Hospitals in the above districts. This study was conducted from August 2016 up to March 2017. The data was collected and analysed using Excel programme.

**Results** Out of the 33 respondents interviewed, 55% were exposed to biological hazards, 45% had no previous exposure to it, 94% had exposure to physical hazards and 6% had no exposure to it, 6% had exposure to chemical hazards and 94% had no previous exposure, no respondent had reported previous exposure to fire explosion and electrical hazards, 70% had experienced psychosocial hazards and 30% had not experienced it and no respondent had experienced ergonomic hazards at this work places.

**Discussion** The findings from this study shows that psychosocial hazards is the most common safety and health hazards because of having a lot of work which often results to stress and violence. This is closely followed by biological hazard which is attributed to lack of proper personal protective equipment. No electrical hazard was reported due to remoteness of these areas and no ergonomic was also reported because respondents had no previous to exposure to lifting heavy object.

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### CURRENT ISSUES FOR HEALTH CARE WORKERS

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**Discuss** Caring for Displaced Persons, Violence in Health Care Setting, health issues regarding nanotechnology, OH issues for Animal Handlers

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### HEALTH HAZARDS IN VETERINARY CARE

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Veterinary health care workers are exposed to a highly diverse set of hazards similar to human health care workers and include exposures to biological, chemical, enviro-mechanical, psychosocial, and physical agents. This session will provide a review of veterinary health care hazards. Biological hazards include exposures to infectious and zoonotic diseases, animal allergens, and biologic pharmaceuticals. Several biologic agent exposures such as tick-borne and Lyme diseases are of concern and transmission routes for many biological agents are not completely understood. Many personnel suffer from animal allergen exposure and assessments estimates as well as disease are needed. Chemical hazards similar to those in human health care such as disinfectant agents which are continuously used and have been associated with asthma, rhinitis, and contact dermatitis in healthcare workers, and antineoplastic drug exposure, primarily used to treat cancer in dogs and cats are of particular concern. Exposure estimates, hazard knowledge among veterinary personnel related to these agents, and current prevention practices including use of PPE are limited. Enviro-mechanical hazards include sharps risks, and ergonomic risks to unsafe equipment, heavy lifting of both animals and equipment, and awkward postures. With many more women in veterinary health care, reproductive risks are significant from physically demanding work, standing for prolonged periods of time, long working long hours, and chemical exposure. Physical hazards include animal-related injuries such as bites, scratches, and crushing injuries from large animals. Animal noise is a unique hazard in veterinary health care (particularly to dogs) and can contribute to hearing loss. Psychological hazards from work-related stress dealing with the care of sick and injured animals, euthanasia, and with human grief are prevalent requiring much more exploration. Safety culture, attitudes and beliefs around personal safety and the expectation that certain hazards are to be accepted and tolerated remains and must be examined and mitigated.

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### NANOTECHNOLOGY IN MEDICAL FIELDS: POTENTIAL APPLICATIONS, TOXICOLOGICAL IMPLICATIONS, AND OCCUPATIONAL RISKS

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**Introduction** Advances in nanotechnologies over the last years supported the development of nano-sized applications for medical purposes due to their beneficial impact on detection, imaging and treatment of diseases. However, new human health hazards may emerge from nano-medicine, also for