Program

6th INTERNATIONAL FOHNEU CONGRESS

16-18 March, Rotterdam 2016

NEW OCCUPATIONAL HEALTH HORIZONS
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Dear Guests and Participants,

of the 6th International FOHNEU Congress titled “New Occupational Health Horizons”,

We would like to welcome you warmly to our Conference which concurs with the 70th Anniversary of the Dutch Association of Occupational Health Nurses (V&VN).

Our sincere thanksgiving to our guests, the invited speakers and all participants.

This year’s conference is co-created by our sponsors, the City of Rotterdam, Rotterdam partners, Convention Bureau Erasmus, the Scientific Committee, the Organizing Committee and many volunteers. We appreciate the great contribution as without them there would have been no Congress.

Scientific Committee has created a substantive and interesting Scientific Program, that challenges every professional, into the interdisciplinary team work in the field of occupational Health. So be aware, read, hear, discuss, learn, ask, listen and see what's New on the Occupational Health “Horizon”.

Organizing Committee has worked hard to serve all of you during the conference and your stay in the City of Rotterdam. Social Program including the pre-congress tour, Welcome reception and Cruise & Dance party with congressional Dinner, will give the opportunity to lobbing and making acquaintances, personal and professional, with occupational professionals all over Europe and worldwide. During the Congress Dinner (which is partly sponsored by the Dutch association OHN) V&VN’s 70th anniversary will be celebrated as well!

We hope that, as long as for the FOHNEU Congress 2016 and the much promising Social Program, you will also have the opportunity to visit all the highlights, inside and around, of “The Place to Be”: The City of Rotterdam!

Each One of you is warmly welcome!

Thank you again for Coming and Participating in our 6th International Congress!

On behalf of the FOHNEU and the V&VN,

Styliani Tziaferi
Assistant Professor
Dep.of Nursing, University of Peloponnese
President FOHNEU
Tel +302107715672
Mobile +306976041656
Email: presidentfohneu@gmail.com

Gerard Michorius
President of the Dutch Occupational Health association
President Organizing Committee
FOHNEU Congress 2016
Email: gbmichorius@gmail.com
Ms Styliani Tziaferi
President
Federation of Occupational Health Nurses in the European Union (FOHNEU)
Vyzantiou 34
23100 Sparti
GREECE

Dear Ms Tziaferi,

Thank you for your online application of 23 September 2015 seeking the patronage of the European Parliament for the 6th International FOHNEU Congress entitled ‘New Occupational Health Horizons’ that is to be held in Rotterdam from 16 to 18 March 2016.

The aim of your conference, namely to bring together experts in the field of occupational health and safety, students, decision makers and other interested citizens and NGOs to openly discuss and share their ideas and best practices on the subject, is much appreciated by the European Parliament.

Our institution strongly believes that prevention of occupational risks is one of the fundamental ways of creating and maintaining healthier and safer working environments, improving working conditions and effectively combating workplace accidents and occupational diseases. Since health and safety is a dynamic field that must constantly adapt and respond to changing work environments, there will always be a need for training and exchange of experiences. Congresses such as yours are therefore very welcome.

In 2014, the European Commission proposed an EU Strategic Framework on Health and Safety at Work 2014-2020 and my esteemed colleagues are in the process of discussing and reviewing it.

Given the clear European dimension of your initiative, it is with great pleasure that I grant your event the European Parliament’s patronage.

Unfortunately, owing to a prior engagement, I will be unable to attend your event in person.

May I take this opportunity to wish you every success with what should be an excellent congress.

Yours sincerely,

Martin Schulz
Greetings to the 6th International Congress of the Occupational Health Nurses in the European Union (FOHNEU)

Rotterdam, The Netherlands
16-18 March 2016

As President of the International Council of Nurses, I am delighted to extend warm greetings to the 6th International Congress of the Occupational Health Nurses in the European Union from the ICN Board of Directors and staff, as well as the 132 member countries we represent. We congratulate you on your many successes and we send best wishes for your Congress and for your future endeavours.

As you look back over the past year, I hope that you will feel proud of your successes and your dedication to improving the health of the people of Europe.

I would particularly like to commend you for your choice of topics at this meeting, "New Occupational Health Horizons". Dag Hammarskjold, who was Secretary-General of the United Nations from 1953-961, said "Never look down to test the ground before taking your next step; only he who keeps his eye fixed on the far horizon will find the right road." And as we venture along that road, it is important that we are not afraid to change, that we are ready to adapt and transform ourselves and our organisations to meet the challenges of the future. Challenges such as universal health coverage and the achievement of the sustainable development goals, for example, are not possible without a health workforce in sufficient numbers, and adequately trained to face the needs of the population. This is one of the top priorities of the International Council of Nurses and we urge occupational health nurses, along with your colleagues in other fields, to become fully involved in the development and implementation of policy, here in Europe and worldwide, to ensure that we all understand the importance and potential impact of the SDGs, the Strategic Directions for Nursing and Midwifery, and other such critical policy pieces. As the largest of the health professions, it is our duty to ensure that our voice is heard.

I therefore commend you for your efforts to raise the profile of nurses within the European Union, and to contribute to the overall health of the working population. I would also like to congratulate you on the great strides in promoting evidence based practice in your region.

I send you our best wishes for a successful congress.

Judith Shamian
President
International Council of Nurses (ICN)

From
The Dean of Faculty of Human Movement and Quality of Life Sciences (FHMQLS), University of Peloponnese (UOP),
Prof. Konstantinos Georgiadis

Dear FOHNEU and V&VN Members,
Dear FOHNEU Congress 2016 Participants,

I would like to express to you my delightful greetings and my sincere thanks for your invitation to address the participants during the 6th International Congress, which, referring to its title, sets the floor for taking off the Occupational Health services, into the future, of any workplace in Europe and worldwide.

The topics of your Scientific Program according to the keynote speeches, indicate modern areas of scientific and professional issues that challenge every occupational health professional to think and debate into his/her daily working life. Key strategies are being referred and evidence-based studies are announced by Occupational Health Nurses, being the frontline in promoting the well-being of various kind of workforce.

The Faculty of Human Movement & Quality of Life Sciences of the University of Peloponnese, having the second Nursing University Department in Greece, where Occupational Health is being taught in undergraduate and postgraduate level, has proudly given its Aegis to your unique scientific event, underlying also the need for application and development of ethical norms and moral principles in any workplace, harmonizing workers with their environment and cultivating an inter-disciplinary team work with strong work ethics. Wishing for a successful and fruitful Congress!

Dean of FHMQLS
University of Peloponnese

Prof. Konstantinos Georgiadis
Accreditation is granted by:

V & VN Occupational Health Nurses

- Wednesday 16 - 3 : 0,5 points
- Thursday 17 - 3 : 1,125 points
- Friday 18 - 3 : 1,125 points

Maximum of 2,75 points for the entire conference

V & V nurses and caretakers Netherlands

- 9 points each congress day
- Maximum of 18 points for both conference days

- V & VN members and nurses must complete their V & VN membership number and BIG registration at the registration desk.
- V & VN members and nurses must have knowledge from the different program parts.

Accreditation is obtained from:

- V & VN nurse specialists and
- NVBF Dutch association for occupational physiotherapist

Each participant receives a certificate of attendance in the conference.

Participants for one day have to pick up their attendance certificate at the end of the day at the registration desk.

Participants for the whole congress pick up their attendance at the end of the last congress day.
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organizing- and scientific committees

Organizing Committee:

Gerard Michorius  (Congresspresident, President of V&VN Arbo Netherlands)
Judith Fakkel-van den Berge  (Netherlands) Board member of FOHNEU
Göte Mölleby  (Sweden) Board member of FOHNEU
Valérie van Gulck  (Belgium) Board member of FOHNEU
Geert van Gent  (Netherlands) Board member of FOHNEU
Anna Korompeli  (Greece)

Scientific Committee:

Styliani Tziaferi  (Greece) President of FOHNEU
Panayota Sourtzi  (Greece) Board member of FOHNEU
Julie Staun  (Denmark) Board member of FOHNEU
Petra Jonker-Jorna  (Netherlands) Member of V&VN Arbo
Yvonne Heerkes  (Netherlands) PhD. Professor (Associate)
Josephine Engels  (Netherlands) PhD. Professor (Associate)
keynote speakers

Professor Dr Alex Burdorf

Chair Determinants of Population Health
Department of Public Health
Erasmus MC Rotterdam

Alex Burdorf is full professor responsible for the research programme “Determinants of Public Health” that comprises research groups on social determinants of population health, determinants and intervention of health-related behaviours, and occupational health. His current interests includes studies on reciprocal relations between health and paid employment and working longer in good health and the role of workplace health promotion programmes in contributing to productive and sustained employment. He has authored well over 300 scientific publications on a variety of topics in occupational health and in public health.

Keynote speech: “Role of health promotion programmes for productive and sustained employment”
This presentation will (i) present an overview of the relative importance of work-related determinants and health behaviours for performance at work, (ii) estimate the impact of interventions on these factors on worker-related outcomes, such as health, work ability, and labour force participation, and (iii) discuss consequences for design and implementation of health promotion programmes in occupational groups.

Professor Rob Gründemann

TNO, Sustainable Productivity & Employment. Senior researcher/consultant Research Centre for Social Innovation, Professor, University of Applied Sciences Utrecht, The Netherlands, rober-t.grundemann@hu.nl, www.robgrundemann.nl

Keynote speech: "Employability of older workers"
Rob Gründemann studied Sociology at the University of Utrecht and graduated in 1998 at the University of Amsterdam on the subject of labor bondage of WAO entry. Since 1976 he has worked at TNO Participation & Social Cohesion. Currently a senior researcher / consultant in the field of employment of low-skilled workers. Since February 1, 2007 he is lecturer at the research organization Configurations and Labour Relations HU. With the implementation of various surveys, and the results thereof Gründemann works as a lecturer involved in the health of Hogeschool Utrecht, the professional space of
teams and the diversity policy. He also does projects in the field of aging and career development for older workers. In this lecture developments will be discussed that affect the ageing process of the workforce. Due to legal measures the pension age has gone up in many European countries. Older workers stay in employment for a longer time and the average age of the workers in companies has increased. In this situation it is important that ageing workers stay motivated at work as long as possible. Low skilled workers acquire extra attention in this respect. They have often started working at a young age and often work in physically demanding stressful professions. Therefore they have a greater risk to wear out physically. Low-skilled older workers often want to retire earlier than high-skilled older workers and less often report to be willing or able to work on to their retirement age. That’s why we have investigated whether more responsiveness to values of work low-skilled older workers contributes to a better appreciation of this employees at their workplace and that they therefore remain longer motivated for work and be more willing to work longer. In this study we have looked at the work values of older low-skilled workers and compared these with those of older middle- and high-skilled workers. We identified the following research questions:

1. To what extent are work values of older low-skilled workers other than those of older middle- and high-skilled workers?
2. In which way do work values of older low-skilled workers change with an increase in age?
3. To what extent are work values of older low-skilled workers satisfied by the employer?
4. Does fulfilling work values of older low-skilled workers affect their job satisfaction and their willingness to extend their working life?

To answer these questions we have done a literature review and secondary analysis on a large database of people aged 45 and older. This has led to the following conclusions:
- Older low-skilled workers find extrinsic work values more important than older middle- and high-skilled workers. In contrast middle- and high-skilled workers attach significantly more importance to intrinsic work values. At the social work values in the research and the convenience values, there is hardly any difference between the levels of education of the older workers.
- Broken down into age categories older low-skilled workers hardly differ in work values.
- Although work values are often present in the work of older high-skilled workers, the most important work values are more often fulfilled in the work of lower-skilled workers.
- Older low-skilled workers appear slightly more satisfied with their work as (important) work values are more satisfied by the employer.
- The relationship between work values and its fulfillment and the desired retirement age is weak among older low-skilled workers.

Based on these results recommendations have been formulated for HR and occupational health focused on the employability of older low-skilled workers.
Valerie Van Gulck

OHNurse Coordinator Groep IDEWE Mechelen – Belgium
Co-founder Befohn
Board member FOHNEU – Belgium

Health and safety for Small and micro sized enterprises (SME’s) is crucial for Europe’s economy, as they represent the greatest part of all enterprises in the EU. Risk prevention and the promotion of safer and healthier conditions in the workplace are important, not just to improve job quality and working conditions, but also to promote competitiveness. Keeping workers healthy has a direct and measurable positive impact on productivity, and contributes to enhance the sustainability of social security systems. Preventing workers from suffering serious accidents or occupational diseases and promoting workers’ health throughout their working life, from their first job onwards, is the key to allowing them to work for longer. There is a lack of concern about health and safety at work at SME’s and the statutory obligation is the main motivation for the enterprise to undertake an assessment of occupational risks. SME’s often say that they need assistance with risk prevention, due to their lack of internal skills in this area. As SMEs need simple, flexible, efficient and cost-effective security solutions, it is important to maintain a high level of compliance with OSH principles. The risk management system increased the capacity of micro and small enterprises implement effective and efficient risk prevention measures in their organisation but support is needed for risk assessment at individual level. OHServices can provide this solution. The risk management system is preferably an interactive IT tool with intuitive navigation, sectoral educational content, standard formats, possibility to archive the filled out forms and background intelligence to obtain the dynamic aspect.

Prof. dr. C.T.J. Hulshof

MD PhD, Coronel Institute of Occupational Health

Keynote speech: Task reallocation occupational health
Carel Hulshof is board-certified as occupational physician in 1982 and as epidemiologist (A) in 1992. He worked from 1979 until 1983 as occupational physician at the regional Occupational Health Service (OHS) in Nijmegen and from 1984 until 1999 as part-time occupational physician at the regional OHS in Amsterdam. From 1983, he holds a position at the Coronel Institute of Occupational Health of the Academic Medical Center in Amsterdam, first as a researcher and senior lecturer, from 2005 as Associate Professor and from 2011 as a Professor in Occupational Medicine. Over the last years he has been intensively involved in the
Medicine (NVAB) and from 2004 he is co-ordinator of the practice guideline development programme at the Centre of Excellence of the NVAB.

Research over the last five years has concentrated on the topics: development and evaluation of monodisciplinary (for occupational physicians) and multidisciplinary practice guidelines; new ways for knowledge dissemination; application of evidence based medicine in occupational health; workers’ health surveillance; epidemiology, prevention and intervention of health effects due to occupational exposure to whole-body vibration; evaluation research in occupational health care (e.g. predictive value of pre-employment examinations).

**Xabier Irastorza, speaker in special session**

*EU-OSHA, Prevention and Research Unit irastorza@osha.europa.eu*

Xabier Irastorza has been working at the Prevention and Research Unit of the **European Agency for Safety and Health at Work (EU-OSHA)** since August 2007. The main projects he is involved in are, among others:
- Migrant workers and occupational safety and health (OSH).
- Economic impact of accidents and ill-health at work.
- European Survey of Enterprises on New and Emerging Risks (ESENER). Two waves of the survey have been carried out, in 2009 and 2014. Results – overview and summary reports (for both surveys) plus in-depth secondary analyses along with additional methodological information and visualisation tools are available at [www.esener.eu](http://www.esener.eu). Currently working on the secondary analyses of ESENER-2.

Before EU-OSHA, Xabier worked at another EU agency, the **European Foundation for the Improvement of Living and Working Conditions**, in Dublin.

**Keynote speech on ‘New and Emerging Risk in European Workplaces – Evidence from the Second European Survey of Enterprises on New and Emerging Risks (ESENER-2)’.**

EU-OSHA’s second European Survey of Enterprises on New and Emerging Risks (ESENER-2), interviewed almost 50,000 establishments across all activity sectors in 36 countries in 2014. The survey helps fill an important information gap in the world of occupational safety and health (OSH) by exploring four areas in detail:
- The general approach in the establishment to managing OSH.
- Main drivers and barriers to the management of OSH.
- How worker participation in OSH management is implemented in practice. Following a brief methodological note, the presentation will give an overview of the risk factors present in European workplaces and the main findings for each of the four areas above.
Petra Jonker-Jorna speaker in special session

21-05-1974, GVB Amsterdam, Public Transport, Occupational Health Nurse (MANP/OHN-S)

With much pleasure I do my work as an occupational Health Nurse at GVB, the public transport company in Amsterdam. It’s a company within over 3700 employees. The company has his own Occupational Health Services, where I work together with four occupational physicians and other different occupational workers, we have only one nurse, that’s me. In my work I am responsible for the organization and quality of our core business, absenteeism and also for the monitoring of employees medical reassessment. Besides my work I am also a member of the board of the Dutch federation of occupational health nurses. My main focus within the board is Role redefinition of the occupational health nurse in the domain of occupational health in the Netherlands. I see opportunities to further enhance the role of the occupational health nurse in occupational health care in the Netherlands.

Dr Timo Leino

Keynote speech: Predictive Health and New Technologies in OHS

Timo Leino, D. Med. Sci., Adj. Professor in OHS has worked since 1991 in the Finnish Institute of Occupational Health currently as a Chief Medical Officer. His research interests are the quality and effectiveness of occupational health service, good occupational health practice, health promotion, and ICT-based solutions in OHS practice and education. Besides of scientific publications he is an author or contributor in several text books and guides. He has done work for the ILO, WHO and EU and has served two terms a board member of ICOH.

Professor Ivan Robertson

BSc, PhD, FBPsS, FBAM

Keynote Speech: Psychological wellbeing at work

Professor Robertson is a founder-director of Robertson Cooper Ltd – a University of Manchester spin-off business dedicated to improving wellbeing, performance and leadership in organizations. He has worked on consulting assignments across all sectors of the economy and across the world. He has held visiting posts in the USA (Michigan State University, Singapore (National University of Singapore) and Australia (Queensland University of Technology). He has been responsible for over 40 books on Work & Organizational Psychology and 200 or so scholarly articles/conference papers. His latest books are:

He is a Chartered Psychologist, Fellow of the British Psychological Society and Fellow of the British Academy of Management. Research evidence shows that psychological factors can play a key role in wellbeing at work. Recent research has helped to clarify the relationship between psychological wellbeing and physical health, revealing that cardiovascular health, immune system functioning and metabolism are all related to psychological wellbeing. In addition to this, psychological wellbeing itself is a significant factor in individual behaviour, organizational performance and attendance at work. This presentation examines the key workplace factors that influence psychological wellbeing and reviews interventions that can be used to protect and improve psychological wellbeing in the workplace.

Further monitoring of the progress of implementing ICF is of importance for the occupational healthcare. At this moment no scientific evidence is available around the use of ICF in reporting within the occupational healthcare.

Professor Panayota Sourtzi, speaker in special session

Panayota Sourtzi is a Professor in Occupational Health Nursing at the Department of Public Health, Faculty of Nursing, National and Kapodistrian University of Athens Greece. She has experience in OHN practice in Greece and she holds a MSc in OH and a PhD, both from the University of Birmingham UK. She has published numerous articles in the field of OH in Greek and International Scientific Journals. She has also authored books related to OH in general and OH for health care professions in Greece and has contributed a chapter in the 3rd edition of “Occupation Health Nursing” book edited by K. Oakley. Her research interests are focusing on health promotion of the working population and in health and safety issues of health care professionals.

Special session: Harmonising OHN education: the revised FOHNEU Core Curriculum

The Core Curriculum (CC) for the education of occupational health nurses was first published in 1996 and revised in 2002. Based on the results of 2012 survey on OHN Education, Research and Practice, as well as contemporary literature, the Education and Research group of FOHNEU prepared the 3rd edition of the CC, which was published in 2014. The CC is a comprehensive programme that can be used to develop OHN specialization curricula mainly at postgraduate level and can easily be adapted to the local conditions of EU countries. This presentation will focus on the structure and content of the CC.
Dr Jukka Takala

Senior Consultant Workplace Safety and Health Institute, Ministry of Manpower Singapore.
President of the International Commission of Occupational Health
Doctor of Technology, Adjunct Professor, Tampere University of Technology, Finland, Faculty Member of UNISIM, SIM University in Singapore.

- Dr. Takala has some 40 years of experience in workplace safety and health.
- Prior to joining the WSH Institute as the first Executive Director in 2011, he was the Director of the European Agency for Safety and Health at Work (EU-OSHA) from 2006-2011. He was the coordinator of all EU regulatory agencies in 2010-11.
- He served the International Labour Organisation, ILO as a Director of the ILO’s Global Programme on Safety and Health at Work and the Environment (SafeWork) from 1999-2006. Before that he held several positions in the ILO, e.g. as a Chief of Occupational Safety and Health Branch in Geneva Switzerland, and earlier in Africa, Asia and at ILO Headquarters as Head of the ILO’s Occupational Safety and Health Information Centre, CIS in Geneva. He worked altogether 26 years for the ILO’s Occupational Safety and Health Programme in 1978 - 2006.
- Before that he worked at the OSH Administration in Finland in the Ministry of Social Affairs and Health.
- He has worked also for the Helsinki University of Technology and in the metal industry sector.

Keynote speech: Burden of occupational disease and injury in the EU and worldwide

There is a distinction between “occupational diseases” that are covered by compensation systems, or are expected to be covered, and “work-related diseases”. Depending on the location a large number of illnesses may compensable in one country but not in another. In either case we should look at the prevention of such illnesses. Companies, organisations and employers should have a policy, management system, engagement of workers, allocated resources and responsibilities to systematically tackle the factors contributing to death, disability and disease.

A nation and the entire European Union should have an occupational health services framework established, which would ensure more equal treatment of workers and citizens.

Depending on the point of view, criteria used and data collected we do get a picture of priorities for programmes and action for various stakeholders. A government should have a holistic picture while different economic sectors – and individual workplaces – need more targeted knowledge for their everyday risk management programmes.

In addition to identifying risks caused by work itself there are a number
illnesses, injuries and problems that are present at work, which while caused outside the workplace, are often combined with - and made worse by work. To measure the problems we may look into both lagging and leading indicators, numbers of deaths, illnesses, injuries, Disability Adjusted Life Years, but also rate of absenteeism from work, average age of retirement, work ability index, and results of organisation wide surveys carried out regularly. And to identify solutions we need prevention, protection and promotion together, a wider Total Workplace Health and Safety programme. There are enough health related problems that are very difficult to foresee and eliminate, but the man-made problems can be tackled. We need a mindset that Zero Harm at work is possible. This is a continuous undertaking, for example, in eliminating occupational cancer or fatal injuries, targeting zero violence, zero harassment, zero exclusion. We need Vision Zero.

Hear better in noise

Excessive noise increases the risk of hearing damage, both at work and during leisure time. It is therefore no surprise that noise induced hearing loss is still in of the top 3 of occupational health diseases. Good hearing protection helps to preserve healthy hearing and prevent hearing loss.

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Program New Occupational Health Horizons 2016 Rotterdam

Congress Venue " De Doelen " Jurriaanse Room " plenary session room.

Adress: Kruisplein 30 3012 CC Rotterdam: Entrance - Jurriaanse Complex

12.45 Participants gather for the tour at the entrance hall
13.00-14.00 Departure of the buses and drive to “future land”
14.00-16.15 Visit and tour “Future Land”
16.15-17.00 Departure of the bus and ride back to the congress venue
16.00 Registration with Poster viewing and exhibition
18.00 Walk to The Rotterdam city hall. It is a few minutes walking distance from the conference venue.

18.30-19.30 Conference and welcome Reception

The conference reception will be held at the Rotterdam city hall. A representative of the Rotterdam City Council will welcome you in Rotterdam.

19.30 Free time for diner*

*It is possible to choose a special conference menu. On presentation of the congress badge and the guide you get at some of the restaurants a 3-course dinner and a drink offered for € 27.50.
Thursday 17-3

08.00-09.00 Registration, Poster viewing & Exhibition

09.00-09.30 OPENING CEREMONY
Stella Tziaferi President FOHNEU
Gerard Michorius President V&VN Dutch OH nurses
Mark Kingsford Congress chairman

09.30-09.45 Addresses from ICN, UOP

09.45-10.00 J. de Lange, Senior Consultant TNO Dutch Focal Point (EU-OSHA)

10.00-12.30 Special Session: OHN Education & Development Chair J. Staun (Fohneu)

10.00-10.30 Part 1: Keynote Speaker: Professor P. Sourtzi (FOHNEU)

10.30-11.00 Coffee break with Poster viewing & Exhibition

11.00-12.00 Part 2: Keynote speaker: Prof. C.T.J. Hulshof (Coronel–NVAB)
Keynote Speech: Task re-allocation occupational health

Co-Speaker: P. Jonker-Jorna (OHN-V&VN)

12.00-12.30 Oral presentations in OHN Education:

N.M. Schmickler, G. Schrijvers, L. Mussen, K. Mortelmans
- Development, evaluation and implementation of the Belgian OH services' plan (2010-2015) to broaden occupational nurses’ job tasks

R. van Asperen, M. Quiroga
- OHN education and development

12.30-13.30 Lunch break with POSTER viewing & Exhibition
13.30-15.00  Psychosocial Risks - Chair U. Feeney (FOHNEU)

13.30-14.15  Keynote speaker: Professor Ivan Robertson BSc, PhD, FBPsS, FBAM
Keynote Speech: Psychological wellbeing at work

14.15-15.00:  Oral presentations in Psychological risks: Chair: U. Feeney (FOHNEU)

B. Vriesacker, V. Willems, K. Van Hulst
- Managing psychosocial risks within a Belgian legal framework: a qualitative approach -

M. Janssen, Y. Heerkens, W. Kuijer, B. van der Heijden, J. Engels
- Effects of Mindfulness Interventions on the health of employees -

V. Tsopoki, P. Sourtzi, E. Laiou, S. Tziaferi, E. Velonakis
- The impact of Job Precariousness on the health of Greek workforce -

F. Pelgrims, H. de Raee, S. Vandenbroeck
- The detection of psychosocial risks SMEs -

15.00-15.30  Coffee break with Poster viewing & Exhibition

15.30-17.00  New Technologies in OHS Chair P. Osterman (FOHNEU)

15.30-16.15  Keynote speaker: Professor T. Leino (MD, Adj Prof) FIOH
Keynote Speech: Predictive Health and New Technologies in OHS

16.15-17.00  Oral presentations in New Technologies
Chair: M. Nyman-Hiltunen (FOHNEU)

S. Vandenbroeck
- Wellife- your company’s well being in a snapshot. An online tool to scan and improve your company’s work ability -

O. Koseoglu Ornek, M.N. Esin
- Textile Woman Worker with Psychological Health Problems. An analysis of case study by computerized Omaha System -

N. Molloy
- Wearable HAV management -

17.00-17.30  Special session: Why do you hear in noise better with earprotection than without? -
Speaker: B. Fleskens Chair: Geert van Gent (FOHNEU)

17.30-18.00:  Toast to V&VN/FOHNEU and thanks to our guests.
Poster viewing & Exhibition

Certificates of Attendance at the Registration Desk only for oneday registrants.
18.00–19.30 Free time and preparing for the Congress Dinner!
19.30 -23.30 Congress Dinner -Cruise & Dance party (incl. entertainment, drinks)

Welcome on the steampaddler “de Majesteit” in the Leuvehaven

Adres: Leuvehooif (de Boompjes, nearby the Erasmusbrug) Rotterdam
Metro/subway: Station Leuvehaven nr. D, E
Tram: Leuvehaven nr. 8, 20, 23 or 25
Parking: WTC, Grote markt, Apcoa or Koopgoot
Friday 18-3

08.00-09.00  REGISTRATION, POSTER viewing & Exhibition

**Plenary Sessions**

09.00-09.10  Opening & Welcome 2\textsuperscript{nd} day  
Mark Kingsford:  Congress chairman

09.10-10.30  Aging workforce, Chair: P. Sourtzi  (V&VN)

09.10-09.45  Keynote Speaker:  Professor Dr Alex Burdorf  
Keynote Speech:  Role of health promotion programs for productive and sustained employment -

09.45-10.30  Oral presentations in Health Promotion  (Chair: M. Morrisey  (FOHNEU)  
F. van Eijk  
- Health Monitor -  
K. Lappalainen  
- Association of socio-demographic factors, work ability, health behavior and mental health status with prolonged unemployment among young people -  
J.K. Tomlinson  
- Building A Global Culture of Health and Well-Being -

10.30-11.00  Coffee break with Poster viewing & Exhibition

11.00-12.30  Occupational Diseases, Chair: S. Tziaferi  (FOHNEU)

11.00-11.45  Keynote Speaker:  Dr Jukka Takala (Adjunct Prof), DSc MSc,BSc  
Keynote Speech : Burden of Occupational Disease and Injury in EU and Worldwide

11.45-12.30  Oral presentations Occupational diseases– Chair L.Falck  (FOHNEU)  
J. Fakkel  
- OAE with a Hearing Conservation Program -  
G. Schrijvers, I. Eubelen, M.N. Schmickler, S. Acke, K. Mortelmans  
- Emergency plan highlighting the occupational nurse's role in stemming a fast spreading scabies infection in the Belgian food industry -  
G. Molleby  
- Exposure to chlorine compounds at work beside indoor rehabilitation swimming pools -

12.30-13.30  Lunch break with POSTER viewing & Exhibition
**Parallel Sessions**

**MAINROOM JURRIAANSE KWARTIER**

13.30-15.00  
New Emerging Risks (Chair: A. Meneses Monroy FOHNEU)

13.30-14.15  
Keynote Speaker: Dr X. Irastorza, EU–OSHA  

14.15-15.00  
*Oral abstract presentations: New emerging risks Chair: J. Fakkel (FOHNEU)*  
M. Raeijmaekers, A. Houbrechts, M. Beeldens, K. Mortelmans  
- Tailoring workplace visits to the needs of small and medium-sized enterprises in Belgium: the role of OH-  
A. Koinis, Em. Velonakis, F. Tzavella, S. Zyga, S.G. Tziaferi  
- The mobbing in the health sector and its impact on quality of life of health professionals-  
K. Hoogland, T. van Dijk, L. Wieskamp
  - The transition from an individual, ad hoc approach, to collective, non-stop stress prevention-

15.00-15.45  
Free paper-sessions, Chair: J. Fakkel (V&VN)

15.00-15.45  
E. Konal, S. Telli, H. Kadioglu, S. Karaca  
- The relationship between Alexithymia and Burnout, anger somatization in a sample of turkish nurses-  
- Sleeping problems and coping strategies adopted by nurses working shifts-  
D. van Peel, M.N. Schmickler, L. Mussen, S. Jacobs, S. Acke, K. Mortelmans  
- Communication training for Occupational Nurses to achieve employee and employer satisfaction-

15.45-16.15  
Coffee break with Poster viewing & Exhibition  
Jurriaanse kwartier
PARALLEL ROOM ROTTERDAM 1 MANHATTEN

13.30–15.00  Health Promotion, Chair: G. Michorius (FOHNEU)

13.30-14.15:  Keynote speaker: Prof R. Gründemann
   Keynote Speech: Employability of Older Workers

14.15-15.00:  Oral presentations in Aging workforce (Chair: G. Michorius V&VN)
   L. Brouwers, J. Engels, Y. Heerkens, A. van der Beek
   - Development and use of a vitality scan related to workers' sustainable employability -
   M. Verbrugghe, Y. Kuipers, B. Vriesacker, I. Peeters, K. Mortelmans
   - Sustainable employability for workers aged ≥ 55 years: an explorative study in Belgian companies -
   W. Riderhof, E. Schuurman, K. Rooijackers
   - Effective, efficient and adequate communication between communication between doctor and patient -

15.00-15.45:  Free paper Session, Chair: J. Kurowski (FOHNEU)

15.00-15.45:  H. Hirdi
   - A forgotten story of Europe's first factory nurse training -
   M.N. Esin, O. Koseoglu Ornek, D. Sezkin, E. Aktas
   - Perceptions of the current and future roles of turkish occupational health nurses -
   E. Carlier, N. Doyen, H. de Wulf, M. Verbrugghe, K. Mortelmans
   - Sickness absences > 1 year among domestic cleaning workers: occupational nurses’ key role in a Belgian pilot study -

15.45-16.15:  Coffee break with Poster viewing & Exhibition  Jurriaanse kwartier

Plenary Sessions
MAINROOM JURRIAANSE KWARTIER

16.15-16.30:  Closing Speech

16.30-17.00:  Awards Best Poster & Oral presentation (Nurse Jo)

17.00-17.30:  Closing Ceremony  Thank you & Goodbye

Certificates of Attendance at the Registration Desk
PARALLEL ROOM ROTTERDAM 2 MANHATTEN

13.30-15.00  Risk Management Systems, Chair: G. Molleby (FOHNEU)

13.30-14.15  Keynote Speaker: V. Van Gulck (OHN– FOHNEU)
             Keynote Speech: Risk Management Systems in SME's

14.15-15.00  Oral presentations in Risk Management (Chair: G. Molleby (FOHNEU))
             S.L. Koen
             - Human errors and brain health: lessons from Neuroscience -
             V. Bourna, E.C. Konstantinou, Alexopoulos
             - Hospital cleaning – hygiene related occupational hazards -
             T. Van Dyck, Van Hooste
             - Risk assessment of occupational risks of cytostatic drugs and excreta
during homecare nursing -
             B. Lundh
             - A closed system that leaked - Improving a cap for transferring fluids
between a container and vials in a closed system -

15.00-15.45  Free paper sessions, Chair  L. Wieskamp (V&VN)

15.00-15.45  M. Ardahan, H. Satice
             - Analyzing Musculoskeletal System Discomfort and risk factors of office
workers with computer users -
             Y. Heerkens, C. de Brouwer, J. Engels
             - Elaboration of work related contextual factors to enhance the usefulness
of the ICF in the domain occupation and health-
             C.P.M. de Brouwer, L.G.P.M. van Amelsvoort, Y.F. Heerkens, G.A.M.
Widdershoven, I.J. Kant
             - Towards Occupational Health from a Bio-psychosocial perspective: an
evidence based approach -
             M.J. van Boven, A.M.M. Valks, C.P.M de Brouwer, A. de Jong
             - The effects of a ICF-training on the consultation skills of occupational
health professionals -

15.45-16.15  Coffee break with Poster viewing & Exhibition  Jurriaanse kwartier
oral abstracts
1 Risk assessment of occupational risks of cytostatic drugs and excreta during home care nursing
Van Dyck T, Van Hooste WLC, Occupational Health Services – External Service for Prevention and Protection at Work, Belgium
IDewe, Occupational Health Services – External Service for Prevention and Protection at Work, Interleuvenlaan 58, B-3001 Heverlee, Belgium

Background: The possible contact with cytostatic drugs and excreta can be considered a significant risk in the home care environment.

Aim: To perform a risk assessment to evaluate the occupational risks of exposure to cytostatic drugs and excreta during nursing activities in the home care environment.

Methods: We conducted a risk analysis of a private facility that provides home care nursing, with regard to exposure to cytostatic drugs and excreta. The SARIER®-method, an assessment tool developed by IDEWE, was used for this purpose.

Results: Disconnecting chemotherapy pumps, flushing and infusing heparin in port-a-caths, were found to be the most risky nursing actions. Because cytostatic drugs residues persist up to 7 days after administration in excreta, possible contact forms a major risk. Direct exposure to excreta can occur during toileting, ostomy care, changing urine collection bags, and changing wound drains. Indirect exposure occurs via contact with patient's clothing, bedding, urinal, or toilet seat. An underestimated danger was the lack of safety awareness of procedures with reduce exposure risk. There were no clear safety rules, protocols or guidelines on, how to deal with cytostatic drugs, unlike in the hospital environment.

The first prevention measure is to provide good information exchange between the hospital, the home care nursing, and the patient. Well informed patients and families will appreciate and understand the necessity of the preventive measures, which supports compliance.

Secondly, targeted information, such as clear safety instructions, must be provided. These guidelines must be communicated in a proper and efficient manner, be repeated regularly so working safely becomes a habit. The main personal protective equipment consists of gloves, aprons, masks, and goggles.

Conclusion: Organisational measures to improve the safety culture and awareness among home care nurses have great potential and should be implemented in all environments where administration of cytostatic drugs occur.

Key words Risk Analysis, Cytostatic Drugs, Excreta, Home Care Nursing, Occupational Risk

2 Sickness absences >1 year among domestic cleaning workers: Occupational nurses' key role in a Belgian pilot study
E. Carlier1, N. Doyen1, H. De Wulf2, M. Verbrugghe1, K. Mortelmans1, 1Mensura Occupational Health Services, Work Organization Belgium

Topic: Work Organization

Background: In 2013, 2.32% of the Belgian working population was on sickness absence >1 year. Their return to work (RTW) prognosis is <20%. Sickness absence benefits are paid in the first month by the employer and subsequently by social security. In sectors with high sickness absence rates (e.g., domestic cleaning workers), employers invest in RTW policies.

Aim: Enhance RTW for domestic cleaning workers with >1 year sickness absence.

Methods: In 2015, a pilot study was conducted by one occupational nurse (ON) from Mensura Occupational Health Services (OHS).
The setting was a large Belgian company (>1000 workers) outsourcing domestic cleaning services to clients. Step 1: The company mapped all workers on sickness absence >1 year. Step 2: The ON called the workers. Using a telephone protocol, the ON collected workers’ data on sickness absence reasons and workers’ wish to receive RTW support. Workers willing to receive support from the OHS were referred (voluntarily) to an occupational physician (OP) consult. Step 3: The OP evaluated three options: reintegration program, dismissal on medical grounds, further sickness absence.

**Results:** A sample of 35 workers >1 year sickness absence was detected and called. Reasons for sickness absence were psychosocial (38%), musculoskeletal (36%), and other (26%); 31% (n=11) of the workers wished RTW support from the OP and one worker additionally from her immediate supervisor. Subsequently, 29% (n=10) consulted the OP. The OP referred 0% of the workers to a reintegration program; 70% (n=7) was declared permanently unfit for work/modified work not possible (dismissal on medical grounds); 30% (n=3) remained on sickness absence and contact with ON was continued for further follow up.

**Conclusion:** We illustrated the ON’s potential role in maintaining contact with domestic cleaning workers on >1 year sickness absence. To enhance RTW chances, we recommend including workers already after one month sickness absence.

**Key Words:** sickness absence, occupational nurse

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5  “Wellfie – your company’s well-being in a snapshot” - An online tool to scan and improve your company’s work-ability-

Sofie Vandenbroeck PhD, RN; Liesbeth Aerts, MSc, Liesbeth Daenen, PhD, PT, Lieve Vandersmissen, MD, Lode Godderis, MD PhD, Idewe, external service for prevention and protection at work, Katholieke Universiteit Leuven, Belgium

**Background:** Working life will increase in Belgium due to a raise of the legal retirement age. The success of this action will depend on the willingness and ability of workers to remain at work. Good working conditions and work-ability are the backbone of sustainable employability. Work-ability, balance between workers’ resources and work demands (Ilmarinen 2004), should therefore continuously be monitored and promoted.

**Aim:** To support employers and employees in this task, the online tool “Wellfie” was developed.

**Methods:** Wellfie is inspired by the holistic model “house of work ability”. (Ilmarinen 2004). It consists of individual resources and factors related to work(ing) and the environment outside of work. The roof represents “work-ability”, which is based on four levels, i.e. 1) health and functional capacities, 2) competences, 3) values, attitudes and motivation, 4) work, work community and leadership. First, a literature review was performed to select validated scales assessing work-ability and the four floors on both employer and employee level. Next, all partners provided evidence based feedback linked to each possible answer on the scales. The feedback is focused on retaining or improving work-ability. Three web lectures guide employers during the application of Wellfie.

**Results:** Wellfie consists of a website with background information and a login space for the employer. After registration and completion of the questionnaire, the employer receives a policy report. Subsequently, the employer sends a personal link to the employees providing them access to the employee questionnaire. After completion, employees immediately obtain personal, oriented feedback. If more than 10 employees completed the questionnaire, the employer receives a report with advices linked to the group results.
**Conclusion:** The online tool Wellfie supports employers as well as employees in preserving and improving work-ability. Work-ability is a shared responsibility and considered to be a key factor in a long and healthy career.

**Key-words:** Work-ability, resources, demands, long and healthy career

**6 Managing psychosocial risks within a Belgian legal framework: a qualitative approach**

*B. Vriesacker, V. Willems, K. Van Hulst, Mensura Occupational Health Services, Belgium*

**Topic:** psychosocial risks

**Background:**
Belgian’s legal framework concerning psychosocial risk management obliges companies to perform a psychosocial risk assessment.

**Aim:** This study aims to describe the results of a psychosocial risk assessment in a large multinational company, using qualitative methods.

**Methods:** The target population consisted of 260 higher educated office workers with a variety of cultural backgrounds. A sample population of 25 employees was selected by the company’s human resources department and prevention experts who specialize in psychosocial workplace issues. Step 1: The prevention experts conducted 25 in-depth interviews on site at the company. The interviews were semi-structured—to meet legal requirements—and assessed five subcategories: work organization, content, terms and conditions, environment and relations. Step 2: In collaboration with the management team, the prevention experts chose three topics concerning psychosocial risk factors for four group brainstorming sessions according to World Café methodology. Data were collected from April to June 2015.

**Results:** The interviews highlighted a lack of clear and transparent communication, the way recognition was given and how objectives were set and evaluated. These are all risk factors on an organizational level. Concerning work terms and conditions, training and development was considered unstructured and thus was not implemented. The following three topics concerning psychosocial risk factors were selected for further brainstorming: communication, recognition and performance management. Concerning communication, suggestions related mainly to improving informal inter-departmental communication. Concerning recognition, the people skills of direct managers were addressed as a key indicator for enhancing recognition. Concerning performance management, suggestions were made for setting clear objectives embedded in a transparent evaluation program and developing a personal development program.

**Conclusion:** Psychosocial risks are situated mainly on an organizational level. Upper management will develop and implement a prevention plan with specific actions. This study illustrates the added value of qualitative methods in assessing psychosocial risks in the workplace.

**Key Words:** psychosocial risk assessment, qualitative study
8 Title: Development and use of a Vitality Scan related to workers’ sustainable employability
Livia Brouwers, HAN University of Applied Sciences, Nijmegen. The Netherlands

Background: In today’s Western world, people have to work longer before they can retire and the working population is aging. They are confronted with a fast changing work environment and continuously increasing work demands. Therefore, the need is growing for a sustainable career perspective and so-called life-long learning to face these challenges. For employees it is important to stay healthy in and engaged at their jobs. A good balance between the strain (physical and mental) caused in the job and the employee’s working capacity is crucial to keep employees healthy and vital at work.

Aim: In monitoring sustainable employability, it is important to detect signs of stagnation in functioning as early as possible. However most validated questionnaires that could be used as such are extensive and difficult to obtain. Our objective was to develop a usable and valid tool, a Vitality Scan, to determine possible signs of stagnation in one’s functioning related to sustainable employability.

Methods: A literature review was performed and expert input was obtained to develop an online survey. A sample of 1722 Dutch employees was recruited.

Results: Internal consistency measures and factor analysis resulted in 28 items divided into five subscales with acceptable to good reliability. These subscales included: balance and competence, motivation and involvement, resilience, mental and physical health, and social support at work. The developed Vitality Scan showed good measurement properties.

Conclusion: It is applicable as a user-friendly, evaluative instrument for worker’s sustainable employability. The scan’s value for determining whether or not the employee is at risk for a decrease in functioning during present and future work, should be further tested. At present, the Vitality Scan is already in use to support a constructive dialogue between supervisors and employees on relevant sustainable employability issues, so more awareness is created, supervisor support is increased and targeted measures can be taken.

Key Words: vitality, sustainable employability, clinimetrics, dialogue, instrument

9 Health Monitor
Frans van Eijk, Occupational health officer/ergonomist, Occupational Health, Safety & Environment Department, building 2R113 Océ-Technologies B.V.

Background: Océ-Technologies B.V. Venlo NL, 2300 employees) extends its Health Policy with a periodical (3 years), voluntary medical examination, the Health Monitor (HM). Scope is lifestyle and labour (Workability, stress & work engagement). Lifestyle-questions concentrate on cardiovascular disease and lifestyle (exercise, smoking, alcohol usage, food, relaxation).

Aim: Working employees will be able to work in a healthy, active, flexible and productive way up to a higher age (‘sustainable employability’).

Method: In September 2013, the OHS Department started the HM examinations for permanent employees of Océ. In 2,5 years, invitations for the examination are sent. When inviting, no targeted selection of persons is applied (e.g. by age, business unit, upon request, absenteeism, etc.). Only the employee receives an outcome of the examination. The examination consists of general and/or validated questionnaires, the measurement of blood pressure, height, weight, and a blood test (cholesterol, glucose,
personally and will give advice on treatment and/or counseling. Just a few (n = < 10) reject this invitation.

From 488 employees about 120 people have a second counsel-talk

Advice given to 488 people: Mostly about food (64%) and exercise (51%). Smoking: 8%. Relaxation/Stress: 54%. General practitioner 62 persons. Career: 17. WAI: 38. Counselor 33. HR 19. Smoking 8% is low (NL ref: 24%). The evaluation shows that participators appreciate this examination.

**Conclusion:** The participation percentage of 55% is relative high compared to similar examinations elsewhere.

**Keywords:** health monitoring, lifestyle, workability, questionnaires, blood test

10 **Effects of Mindfulness Interventions on the health of employees**

Math Janssen¹, MSc, Yvonne Heerkens², PhD, Wietske Kuijer³, PhD, Beatrice van der Heijden⁴, PhD, Josephine Engels⁵, PhD

¹ Research Group Occupation & Health, HAN University of Applied Sciences, Nijmegen, the Netherlands.
² Radboud University, Institute for Management Research, Nijmegen, the Netherlands;
Open University of the Netherlands, Heerlen, the Netherlands

**Background:** In general, Dutch employees have a demanding work environment, characterized by high targets, working overtime, high work pressure, aggression from customers, flex work, continuous organizational changes, job uncertainty, employee shortages, and little autonomy. Teachers and healthcare givers are the professionals with the highest work pressure and stress, and teachers have the highest burnout percentage of the Dutch working force (18.5%). Interventions designed to decrease stress and burnout have generally targeted either the relevant environmental factors (work and private) or the coping strategies of the individual. A very promising person-centered intervention that can be used to reduce stress and to enhance work engagement in employees is mindfulness.

**Aim:** The aim is to obtain a deeper understanding of the effects of Mindfulness interventions (Mindfulness-Based Stress Reduction / MBSR and Mindfulness-Based Cognitive Therapy / MBCT) on the mental and physical health of employees.

**Methods:** In October 2013 a systematic review (PsycINFO, PubMed, and CINAHL) has been performed to obtain a deeper understanding of the effects of Mindfulness interventions (MBSR and MBCT) on the mental and physical health of employees. Twenty-two articles have been identified, describing 20 studies on the effects of MBSR/MBCT. Only two studies addressed the effects of MBCT.

**Results:** Based on an analysis of the studies, it is plausible that MBSR/MBCT significantly increases the amount of mindfulness and (job-related) personal feelings of accomplishment, and decreases emotional exhaustion and stress. There are indications for a significant increase in work engagement, life satisfaction, heart rate variability, self-compassion, quality of sleep, relaxation and authentic functioning. Furthermore, mindfulness may be the cause of a significant decrease in depersonalization and psychological distress. However, only seven studies were of medium methodological quality and 13 were of low quality.

**Conclusion:** Although there is a lack of good quality research on the effect of mindfulness in employees, this study suggest that MBSR/MBCT may help to improve psychological functioning and resilience in employees and to reduce the frequency of mental health
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Background: Mobbing in the workplace of health professionals has been studied the last fifteen years by the scientific community and has occupied public opinion. Many professionals have come against to it in their working environment and directly affects their lives, their quality of life, creating numerous psychological and other health problems.

Aim: To investigate the context of mobbing and the effects of the phenomenon at the quality of life of health professionals, in public hospitals of the first and sixth Health Region of Greece.

Methods: A descriptive randomized pilot study, which completed in April 2015. 40 health professionals (nurses, physicians, administrative and other scientific staff) of a large regional hospital filled in study’s tool. An intervention program in one part of the study population will be implemented after the main study will be completed, which is in progress. The purpose of such intervention programs will be the relief and emotional discharge of the symptoms of mobbing. Health professionals completed four anonymous questionnaires: (WHOQOL-BREF, WPVB (workplace psychologically violent behavior, GHQ28 (General Health Questionnaire), MSPSS (Multidimensional Scale Concept Social Support). Data analysis was performed using the SPSS 18.0 and statistical significance was set to 0.05. The WPVB questionnaire first used in a research study in Greece.

Results: Sample was mainly women (84.6%) with mean age 30-45 years old. 53.3% of participants were nurses, 13.3% physicians or administrators and 20.0% were scientific staff. Results of analysis indicate that health professionals have suffered from mobbing in the workplace from colleagues (p=0,02), superiors (p=0,04) and have a negative impact on their quality of life and health (p=0,015) (stress, depression, reduced social functioning and physical symptoms).

Conclusion: This study expects to record accurately the size of the problem and indicate the appropriate tools for the implementation of interventions (prevention and awareness programs) both by mental health specialists, and the decision makers. As scientific work, this study will hopefully enrich the scientific literature.

Keywords: mobbing, quality of life, health professionals, hospitals


16 Hospital cleaning – hygiene related occupational hazards

V. Bourna¹, EC. Konstantinou², EC. Alexopoulos³

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Health Visitor, MSc, Lecturer Unit Community Health, Department of Public and Community Health, Schools of Health and Welfare, TEI Athens, Greek

Occupational Physician, MD, MPH, PhD, Tutor of Hellenic Open University, Patra, Greek

**Background:** In recent years a growing number of scientific studies have shown a correlation between cleaning operations with respiratory adverse effects including asthma, skin, ocular, neurological, haematological, cardiovascular diseases. Chemicals from cleaning and hygiene products in hospitals may affect health care workers, patients and visitors.

**Aim:** The purpose of the study was to identify the hazardous chemicals and to monitor the corresponding health risks by professional cleaning and hygiene products in a tertiary hospital in Athens, Greece, in a period of 2 years (2012-2014).

**Method:** Data collection was based on the Material Safety Data Sheets of the disinfectants airspace-surface cleaners, and detergents-maintenance products, used by the Subcontractors Cleaning and Nursing Auxiliary Staff. Hazard-Protection level (CLP), exposure limit values [TLVs: TWA(8h/daily-40h/week)- STEL(15 minutes)], related occupational diseases or incidents, the use of personal protective equipment and first aid given were extracted by the Occupational Health Department archive.

**Results:** Out of the 28 cleaning/hygiene products, 77 potentially dangerous chemicals were identified but only for 21 exposure limit values (17 to the Greek law) were available. The 54.5% (R38,H315;4:2) may cause allergic contact dermatitis, 31% (R22,H302:24) are harmful if swallowed, 30% (R36,H319:23) may cause eye irritation, 29% (R41,H318:22) serious damage to eyes, 22% (R34,H314:17) burns, and 19% (R50,H400:15 or R52/53,H412:15) are very toxic to aquatic organisms or harmful to aquatic life with long lasting effects. In addition, 13% (R10,H226:10) contain flammable liquid and vapour and 10% (R25,H301:8) are toxic when swallowed and 9% (R23,H331:7) are toxic when inhaled.

During the study period, we have monitored 9 incidents mainly respiratory irritation, followed by skin or mucous membranes. The majority of incidents demanded first aid or medical care.
**Suggestions / Proposals:** It is necessary to monitor use/storage/disposal of chemicals, and to act proactively by personnel training, medical surveillance, and monitoring occupational accidents and incidents.

**Keywords:** Health Care Workers (HCWs), Occupational Health, Data Sheets Product Safety, Hospital, Prevention, Occupational Risk Assessment

**The relationship between alexithymia and burnout, anger, somatization in a sample of Turkish nurses**

*Ebru Konal*, *Sibel Telli, Hasibe Kadioglu*, *Semra Karaca*

*Ege university Public health nursing department, Turkey*

**Marmara university public health nursing department, Turkey**

**Background:** Alexithymia refers to the difficulty experienced in identifying and describing feelings, having trouble with distinguishing feelings from bodily sensations of emotional arousal and also the presence of impaired symbolization.

**Aim:** The aim of the study was to evaluate the relationship between alexithymia and burnout, anger, somatization in a sample of Turkish nurses.

**Methods:** A descriptive design was used. The study was conducted over the period February 3-28, 2014 with 357 nurses working in four public hospitals in Istanbul, Turkey. Data were collected using the Demographic Questionnaire, Toronto Alexithymia Scale, Maslach Burnout Inventory, State-Trait Anger Expression Inventory and SCI-90 somatization subscale. The analysis of the data was performed using descriptive statistics, the Mann-Whitney U test, Kruskall-Wallis test and Pearson's correlation.

**Results:** Of the nurses participating in the research, 28.6% (n=97) were found to be alexithymic. The alexithymic nurses were found to score higher in burnout scores (p<.05), anger scores (p<.01) and somatization scores (p<.001) than those who did not exhibit alexithymia. A positive weak relationship was found between the alexithymia scores and burnout scores (r=.18; p<.01), anger scores (r=.34; p<.001) and somatization scores (r=.32; p<.001).

**Conclusion**

The study results showed that nurses exhibited a high level of alexithymia, and as alexithymia scores rose, it was seen that anger and somatization levels also increased.

**Key Words**

Alexithymia, burnout, anger, somatization, nurses

**Sleeping problems and coping strategies adopted by nurses working shifts**

A. Korompeli, St. Tziaferi, P. Sourtzi, Th. Katsoulas, P. Myrianthefs, G Fildissis, G Baltopoulos

1. University of Athens, Faculty of Nursing,
2. University of Peloponnese, Faculty of Nursing, Greece

**Background:** Various sleeping problems and coping mechanisms have been presented in the bibliography by researchers in order the negative effects of shift working to be minimized. The aim of this study was to examine if physical activity and daily short nap are two of the strategies that could help nurses cope with sleep problems.
Methods: A pilot cross sectional study took place in Greek hospital nurses. A self assessment questionnaire consisted by the following questionnaires was administered; the Pittsburgh Sleep Questionnaire Index (PSQI), the Athens Insomnia Scale (AIS), the Karolinska Sleep Diary (KSD) and the Physical activity (IPAQ).

Results: The sample size of the nurses was 265, mean age 42.2 ± 7.6 years and 69% were working shifts. Most of them reported poor quality of sleep (65.4%) and insomnia problems (65.9%), as it was stated by PSQI and AIS, respectively. The mean reported Total Sleep Time (TST) was 5.73±1.71 hours. The overweight participants (BMI >13.7%) reported to have lower TST (p=0.019). Also, the workers who had a short nap during the day (44.3%) reported less sleeping problems according to AIS και PSQI (p<0.05). A positive correlation was found between AIS and the number of nights shifts weekly (r=0.2, p=0.048). The longer working experience nurses had, more poor quality of sleep was reported, according to PSQI (17.1±8.2 vs 14.0±7.4, p=0.028). According to IPAQ, 57.5% of the participants reported high and the 39.7% moderate physical activity. Finally, nurses who reported to feel refreshed after awakening, had high physical activity compared to those with moderate/low physical activity.

Conclusion: The results of our study are in accordance with the most studies in the literature. The most important to be highlighted is the beneficial effects of the daily nap and of the physical activity to sleeping and insomnia problems.

35 Elaboration of work related contextual factors to enhance the usefulness of the ICF in the domain occupation and health

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Background: In 2004 Heerkens et al. proposed to use the concepts and the terminology of the International Classification of Functioning, Disability and Health (ICF) of the World Health Organization (WHO) to describe the responses of the human organism to work. Purpose was to bridge the gap between the terminology used in healthcare and the terminology used by professionals in occupational health.

Now, more than ten years later, the ICF is used – occasionally - within the domain occupation and health e.g. in documentation, guidelines, research, teaching (e.g. Master Work, Health and Career of Maastricht University), and in developing measurement instruments related to work participation (e.g. to assess the ability to work). However, working with the ICF in this domain made clear that in the present list of environmental factors many work related items are missing and that personal factors (not present in the ICF) are important determinants for work ability.

Aim: To give a short introduction of the ICF and an introduction to a newly developed elaboration of work related environmental factors and a list of personal factors of influence on work participation. Examples will be given of the use of the ICF by occupational nurses.

Methods: The elaboration of work related environmental factors and the list of personal factors were developed based on a literature review and an inventory of experiences in using the ICF of professionals working in occupational health care, education or research.

Results and conclusion: The results of this study and the suggestions given can be used in the upcoming revision of the ICF. Researchers, teachers, occupational and insurance
physicians, occupational nurses, allied health care professionals, employers, employees, and policy makers are invited to use the elaboration of work related environmental factors and the list of personal factors and to come up with suggestions for improvement.

**Key Word:** ICF, health, work related environmental factors, personal factors

### 36 Perceptions of the current and future roles of Turkish occupational health nurses

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**Background:** Occupational health nurses (OHN) roles and scope of practices drive change in the line with new regulations in health policies, and workers' current health care needs. Therefore, there is a need to determine traditional, current and future roles and practices in accordance with new health care approach.

**Aim:** This research is a report of an investigation of Turkish OHN's perceptions of their current and future roles.

**Method:** The 210 certificated OHN's who are also members of Turkish Occupational Health Nurses Association (TOHNA) were asked to complete a form that send via mail. Data were collected through a survey which adopted from the questionnaire developed by Mellor and Winsome. Survey includes items about perceived importance and time consume to traditional and current role activities of OHN's. One hundred completed surveys were returned, but only 60 were suitable for analysis.

**Results:** Currently, the most common three activities of Turkish OHNs were found related to administration (47%), health promotion (42%), and treatment (41%). OHNs were less likely to practice rehabilitation, health education. Their most perceived future activities were found to be administration (40%), surveillance and treatment (40%). Also, it is found that rehabilitation, health education and research activities will be more important to their practice and that they will need to consume more time for these contemporary activities. The traditional roles more common among Turkish OHNs, but they aim to practice contemporary activities in the future.

**Conclusion:** The findings of this study suggest that OHNs in Turkey may not be engaging fully in all areas of practice. Moreover, it is the first study about OHNs' perceptions of their and future roles in Turkey. Thus it provides a baseline for the future research


### 37 Analyzing Musculoskeletal System Discomfort and Risk Factors of Office Workers with Computer Users

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Background: Although the prevalence of reported discomfort by computer users is high, the impact of high computer workload on musculoskeletal symptoms remains unclear.

Aim: The aim of this study was to analyze the prevalence of musculoskeletal discomfort related with computer usage, personel and computer related risk factory.

Method: In a cross-sectional survey, 395 workers were included. Research was conducted between July and September 2015. The 21-item questionnaire containing demographic information and participants’ job characteristics and Turkish version of Cornell Musculoskeletal Discomfort Questionnaire were chosen as the evaluation tools for musculoskeletal symptoms and its associated risk factors. Descriptive statistics were computed for mean values and frequencies. Associations with risk factors were assessed by regression analysis.

Results: Of these participants, 250 male (63.3%) and 145 participants were female (36.7%). The mean age of all participants was 45.03 years (SD=8.85). Participants reported musculoskeletal symptoms during the past week, most commonly in the neck (67.85%), back (66.33%), low back (59.49%), right shoulder (45.32%), and left shoulder (43.54%). Being male, the increase in duration of daily computer usage, feeling discomfort when using computer, desk working hours and having knowledge about the ergonomic exercises were risks for musculoskeletal discomfort.

Conclusion: This study provides evidence that musculoskeletal symptoms are common in Turkey office workers. These findings indicate the need for more attention to musculoskeletal disorders among office workers and designing effective preventive interventions.

Key words: Musculoskeletal discomfort, computer using, office workers.

References

39 OAE within a Hearing Conservation Programme
An example of good practice in the prevention of noise induced hearing loss (NIHL)-
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Background: In an attempt to address a long standing problem of noise exposure resulting in hearing loss among production workers, a large multinational manufacturer in the Netherlands, decided to implement a new approach to solving the problem.

Aim: To gather stronger evidence, more robust and appropriate measurements using the (OtoAcousticEmission OAE ) was introduced. The aims were to create an evidence based platform to promote appropriate solutions, to facilitate a stronger interaction with workers based on trust, and to implement a process to challenge current practices through engagement and empowerment opportunities.

Methods: A hearing conversation program was established. The OAE testing process
included an inspection of the ear (otoscopic examination), Pure Tone Audiometry, tympanometry and a further OAE test to detect an early indication of damage to the outer hair cells of the inner ear caused by noise exposure. The procedure also included individual coaching with each worker on the health risks of noise. The program was effectuated by the company occupational health nurse. New noise maps were created for the factory by taking spot measurements of noise levels and undertaking personal dosimetry for individual worker exposures over an 8 hour working day. Based on the data, relevant custom made hearing protectors were selected. Before starting the program the occupational health nurse was trained by a company with substantial experience in hearing conservation programs.

**Results:** The OAE test was found to provide an invaluable addition to the management process of addressing noise exposure at work, resulting in a robust hearing conservation programme including custom moulded hearing protection. The occupational health team reported that it was a more effective and efficient method of monitoring workers’ hearing function and that it played a vital key role in raising awareness of the noise problem for both workers and managers.

**Conclusion:** Since implementing the program general awareness of noise has increased, more employees wear their hearing protection, hearing loss is not increasing, and a 50% reduction of noise exposure has been achieved.

**Key Word:** Hearing Conservation

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40 Emergency plan highlighting the occupational nurse’s role in stemming a fast spreading scabies infection in the Belgian food industry

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**Topic:** New Emerging Risks

**Background:** Outbreaks of scabies, a skin disease caused by a parasite, in industrialized countries are rare, mainly observed in healthcare settings (e.g., nursing homes), and underreported. Gaps in the literature include examinations of outbreaks in non-traditional settings and the occupational nurse’s (ON) role in stopping the epidemic.

**Aim:** To present an emergency plan highlighting the ON’s role in stemming a fast spreading scabies outbreak.

**Methods:** As the 778 seasonal employees at a Belgian food company have direct contact with food (e.g., preparation and handling), Belgian legislation requires mandatory annual medical examination by an ON and an occupational physician (OP). On January 27th, 2014, the OP detected the first case of crusted (Norwegian) scabies. In response, the ON, OP, and the food company’s management developed and implemented an emergency plan within two days.

**Results:** The emergency plan included: (1) information: A fact sheet was developed and distributed in addition to the organization of information sessions; (2) hygienic intervention: hand washing, disinfection and wearing gloves for all employees continued for six weeks after the last case; machine washing of work clothes with hot water; repeated cleaning of rugs, surfaces, and chairs; (3) data monitoring: day one: one case was detected; day three: five more cases were detected; and day 24: the last case was detected; (4) detection of new cases: the ON increased her presence at the company, questioned employees about itching and scratching, and clinically searched for scabies rash or signs of scratching. Employees with symptoms were referred immediately to their general practitioner, who confirmed and
treated scabies infection among 84 employees.

**Conclusion:** We highlighted the ON’s role in stopping a scabies epidemic. To share knowledge, we will make the fact sheet available.

**Key Words:** Scabies, Infectious diseases, Food industry

**41 Communication training for Occupational Nurses to achieve employee and employer satisfaction**

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**Topic:** Communication skills

**Background:** In most developed countries, occupational health surveillance includes occupational health assessments performed by Occupational Physicians and/or Occupational Nurses (ONs). These assessments demand good communication skills. Literature about the effectiveness of communication training for Occupational Nurses is scarce. With this study, we hope to help fill the gap in the literature.

**Aim:** This project aims to describe the effects of implementing communication training for ONs.

**Methods:** In 2013, 20% and in 2014 the next 80% of all ONs (n=79) of Mensura, a Belgian Occupational Health Service, were given 2.5 days training in customer-centered communication skills. The customer was defined as both the worker having an occupational health assessment and the worker’s employer. During the training, various communication tools were taught to the ONs. The ONs’ feedback on the training was evaluated qualitatively in discussion groups immediately after the training, and again after the implementation phase. In 2011 and 2013, the ONs’ job satisfaction and the customers’ satisfaction with Mensura’s services were evaluated through an on-line survey using a 10-point answer scale.

**Results:** The ONs found the communication tools helpful in adequately understanding and responding to the needs and desires of the customer. The ONs gained confidence in dealing with difficult customers and were able to implement their strengthened communication skills through client-centered consultation practices such as introducing themselves, explaining the meaning of the assessments, and offering unhurried care. The ONs’ mean job satisfaction rate increased from 5.9 in 2011 to 7.1 in 2013. In 2011, 42% of employers were satisfied or very satisfied with Mensura’s services. In 2013, 46% were very satisfied.

**Conclusion:** Our study showed that improving ONs customer-centered communication skills resulted in an increase in both ON and client satisfaction. Therefore, the training will be provided in 2015-2016 to all Mensura workers. New satisfaction surveys will be organized afterwards.

**Key Words:** communication training, customer delight

**42 Sustainable employability for workers aged ≥55 years: an explorative study in Belgian companies**

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**Topic:** Aging workforce
Background: The European Agency for Safety and Health at Work (EU-OSHA) will publish country-specific e-guides in 2016 promoting older workers’ sustainable employability. Each e-guide will be based on insights concerning the type of information and tools employers are looking for to implement effective approaches to promote sustainable employability.

Aim: To assess the specific needs of Belgian employers concerning older workers’ occupational health and safety issues.

Methods: A cross-sectional study was conducted among Belgian employers in April 2015. Researchers from a) Milieu (company coordinating the e-guide project), and b) Mensura Occupational Health Services (OHS) developed a 13-item questionnaire. The survey addressed (1) the needs and importance given to sustainable employability in companies, and (2) knowledge regarding relevant national policies. The questionnaire was distributed electronically to the management of 22,084 companies (private sector) affiliated with Mensura OHS.

Results: Ten percent (n=2133) opened the e-mail, and 37% (n=790) of them completed the questionnaire. In 86% of the responding companies, sustainable employability of workers aged ≥55 years plays an important role. 70% have no active sustainable employability policy/initiative. 18% experience difficulties promoting sustainable employability. 86% indicate no need for support to promote sustainable employability. The respondents noted the following health complaints among workers aged ≥55 years: work-related health problems (31%), stress (26%), work agreements/type of work (17%), work/life balance (15%), and career development and/or training (9%). Topics concerning health and well-being of workers aged ≥55 years requiring the most attention include motivation (30%) and adaptation of the workplace to their (health) requirements (26%).

Conclusion: The e-guide should a) raise further awareness among employers about the importance of implementing an active sustainable employability policy to prolong working life in a healthy and productive way, and b) include tools to address work-related health problems and stress, motivation, and adaptation of the workplace to the (health) requirements of workers aged ≥55 years.

Key Words: sustainable employability, e-guide

44 Development, implementation and evaluation of the Belgian Occupational Health Services’ plan (2010–2015) to broaden occupational nurses’ job tasks

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Background: In several countries, occupational physicians (OPs) are becoming scarce. We provide inspiration for countries facing an OP shortage. The presented principle is applicable to virtually any occupational health surveillance system.

Aim: Present Mensura Occupational Health Services’ (OHS) plan to broaden occupational nurses’ (ONs) job tasks and relieve OPs from routine tasks.

Methods: Historically, in Belgium, medical examinations were conducted by an OP-ON team. In 2010, a plan was developed wherein ONs execute routine medical examinations on their own for employees working in small companies without chemical or safety occupational risks. The ON refers employees to the OP for observed aberrant results or at the employee’s request. ONs received 11.5 days of training for this task. 5-year objective: 25% of routine
medical examinations executed by ONs in a solo setting, while (1) increasing OPs’ availability for specialized medical exams, e.g. for employees who are pregnant or perceiving work-related health complaints; (2) increasing OPs and ONs job satisfaction, and services satisfaction for small company employers (measured every two years on 10-point scale); (3) Keeping stable the absolute number of routine medical examinations performed, assuring Mensura’s legal compliance and profitability.

**Results:** In December 2014, 20% of routine medical exams were executed by ONs in a solo setting. ONs referred 50% of examined employees to an OP. There was an increase of specialized medical exams in relation to the total number of medical exams from 10% in 2011 to 16% in 2014. ON and OP job satisfaction increased from 5.9 in 2011 to 7.1 in 2013. In 2011, 42% of employers were satisfied or very satisfied. In 2013, 46% were very satisfied. The number of routine medical exams performed remained stable: 196,752 in 2010 and 195,207 in 2014.

**Conclusion:** We demonstrate that broadening ON tasks may be in accord with increased efficiency for OHS and stakeholder satisfaction.

**Key Words:** strategic, decision making, changing roles

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Towards Occupational Health from a Biopsychosocial perspective; an Evidence Based approach

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**Background:** Traditionally, Occupational Healthcare is strongly rooted in the biomedical paradigm, which is characterized by a reductionist view, taking a symptomatic disease/disorder or injury as the primary point of departure for prevention and care. Fostering sustainable working lives and dealing with more diffuse psychosocial problems of employees requires different assessment and reasoning skills. To facilitate a shift in focus from post diagnosis tertiary care towards fostering the health of employees across the lifespan, the need for the bio-psychosocial paradigm becomes paramount (1). Professionals should be equipped through education and training to think and act in accordance with this paradigm, through integration in their assessment and clinical/scientific reasoning skills. The International Classification of Functioning, Disability and Health (ICF), can add to this aim. This is especially so when a more precise description of a specific context is available like the elaboration of the ICF for the subfield of work and health by Heerkens et al.

**Aim:** In the new master Work Health and Career (WHC), commencing in 2013 at the Maastricht University, the ICF and the elaboration are implemented in the one year curriculum. The ultimate goal of this curriculum is to produce professionals capable of fostering sustainable work within organisations (e.g. occupational healthcare services).

**Methods:** To boost the implementation process of the ICF within the WHC curriculum the ICF training was grafted onto the generally accepted tradition within health sciences and medicine of working evidence based, for which the format of the Critically Appraised Topic
Results: Results about the influence of ICF-training on knowledge, skills and attitude of the students will be presented.

Conclusion: Using the CAT as a vehicle for applying skills learned in the ICF-training, enhances students in their assessment, clinical/scientific reasoning and communication skills, and adds to the necessary paradigm shift.

Key Word: ICF-training, assessment, scientific reasoning skills, biopsychosocial paradigm, evidence based, Critical Appraised Topic (CAT)

References:
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Expertise Area Occupational Health Nurse
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Background: Commissioned by the Ministry of Health (Health, Welfare and Sport), the professional association Nurses and caregivers Netherlands (V&VN) new professional profiles, including the Professional Profile Nurses, developed and presented in March 2012. This professional profile has been developed by the nurses themselves. Following the Occupational Health Nurses were asked to describe their expertise within the standards and requirements as described in the professional profile Nurses.

Aim: Answering the question "What makes a nurse to Occupational Health Nurse?" By describing what a registered nurse should learn and know, before she is an occupational health nurse.

Methods: determination of the contents of the Area of expertise by discussions with department members. Also selected for description by the Canadian Medical Education Directions for Specialists (CanMEDS) roles and methodology.

The core of the profession, the nurse as caregiver. All other roles (communicator, collaborator, reflective professional, health promoter, organizer and professional and promoter of quality, touching the central role. Both internal (self-employed and salaried) and external partners (including colleges Arnhem / Nijmegen, Rotterdam and Utrecht) and the NVAB (Dutch association for occupational and industrial medicine) have critically examined the Area of expertise Occupational Health Nurse and improved it.

Results: Area of expertise in occupational health nursing competences and skills which describes a nurse who is trained in accordance with the new requirements of the Professional Profile Nurse 2020, must make their own expertise still to be occupational health nurse. In April 2014, the Area of expertise is approved by V&VN and all members of the Dutch association.

Conclusion: Various developments demand of the Occupational Health Nurse that she is positioning herself clearly as an independent operating expert professional with its own quality and professional status recognized as such by legislators and partners. Elaboration of a rearrangement of tasks and clarity concerning responsibilities and powers is important.
Other conditions, such as clarity in legislation and co-operation agreements, distribution of responsibilities and training requirements are also essential.


51 **The impact of Job Precariousness on the health of Greek workforce**

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**Background:** Job precariousness is perceived as of very great concern among the Greek workforce. Labor, budgetary and fiscal reforms together with the imposition of wage cuts have contributed to the spread of uncertainty. Although this social determinant seems to affect the health of employees, families, and communities, evidence on the health-damaging effects is limited.

**Aim:** The aim of this study was to initially measure job precariousness and afterwards to analyze the impact of its aspects on the health of Greek employees, during a vehement financial crisis, culminating since 2008.

**Methods:** A cross-sectional study of 604 temporary and permanent employees was carried out in 2012-2014 in Greece. To assess job insecurity, we used the Employment Precariousness Scale (EPRES), which comprises six subscales: “temporariness”, “disempowerment”, “wages”, “rights”, “vulnerability” and “ability to exercise rights”. The health status was assessed with the Greek version of the Short Form-36 Health Survey.

**Results:** The analysis showed associations between health and specific EPRES subscales rather than the global EPRES score. Vulnerability and the ability to exercise rights are associated with both physical (r= -0.27 and -0.17, p<0.001) and mental health (r= -0.33 and -0.6, p<0.001). These two subscales, gender and the self-reported impact of the financial crisis experienced predicted physical F(4,421) =17.214, p<0.001, R²=0.141 and mental health F (4,413)= 22.229, p<0.001, R²=0.177. All variables apart from the self-reported impact of the financial crisis experienced added statistically significantly to the prediction (p<0.000).

**Conclusion:** The study found a significant association between employment precariousness in terms of vulnerability and the ability to exercise rights and poor physical and mental health, suggesting that psychosocial risk factors at work have adverse effects on health. Further research is needed to evaluate the impact of the financial crisis in larger populations, to strengthen the epidemiological evidence base and to inform labor market policy-making.

58 **A Textile Woman Worker with Psychological Health Problems; An Analysis Of Case Study by Computerized Omaha System**

Ozlem Koseoglu Ornek
Background: Women are affected more by job stress compared to men which is unavoidable at workplace but in long time, it cause psychological health problems such as depression, anxiety and insomnia. The Omaha system (OS) is a standardized and comprehensive framework for classifying nursing interventions on computer base. It is widely used in the world by nurses.

Aim: The aim of this case study is to define psychological health problems of the woman worker by using computerized OMAHA system.

Method: The woman working in a textile factory was examined and interviewed deeply by the OHN. The computerized OS named Turkish Nightingale Notes (T-NN) was used for analysis. The OS consist of 3 components which are the Problem Classification Scheme (PCS), the Intervention Scheme, and Problem Rating Scale (PRS) for Outcomes. The outcomes was evaluated by The Brief Scales for Coping Profile (BSCP) and the Brief Job Stress Questionnaire (BJSQ). The problem rating scale was gradated according to the BSCP and the BJSQ’s score.

Results: A woman of 27 years old, married and have 2 children. She works 11 hours/day. During the examination she had kept crying. Five problems were defined. These problems were income, neighborhood/workplace safety, mental health, neuro-musculo-skeletal function, sleep and rest patterns. The PRS for outcomes’ rate in accordance with the scales from the women for Mental Health problems were “minimal knowledge”, “not appropriate behavior” and “extreme signs/symptoms”. After implementation of nursing interventions (teaching, guidance and counseling, case management, surveillance) the PRS evaluation for the outcomes was improved as being “adequate knowledge”, “appropriate behavior” and “rare signs/symptoms”.

Conclusion: The computerized OMAHA system can be used easily and effectively by Occupational Health Nurses in practice and research for identifying psychological health problems.

Key words: Women workers, Psychological health problems, OMAHA system, textile industry


59  Care for working people - Advice for job reallocation within the Dutch occupational health -
Petra Jonker-Jorna, OHN, Master Advanced Nurse Practitioner, the Netherlands

Background: Commissioned by Nurses and caregivers Netherlands (V&VN) this applied research was conducted which must answer the question of how to get job reallocation between occupational health nurses, nurse practitioners and occupational health physicians within the Dutch occupational health realized.

Question: The purpose of this research is to get an evidence-based advice on reallocation of tasks within occupational health. With the main question: How can reallocation of tasks between doctors and nurses within the occupational health be implemented?

Method: A practice, explorative, mixed-methods research was conducted. Possibilities of
job reallocation were explored where quality of occupational health is promoted, fitting within the current regulatory regime. Research took place on various knowledge sources namely literature, websites, survey, open interviews and a focus group.

**Results:** The extent to which job reallocation within other fields of health care and within the occupational healthcare in other Western countries takes place depends on the extent to which it is controlled by parties active role redefinition. The aspect of the ‘holistic approach' versus the narrower ‘medical view’ of the Occupational Health Nurse Practitioner is frequently mentioned. The VS distinguishes itself from the medical specialist by not only focusing on the patient and the disease, but to see the patient in his wider (social) environment.

**Discussion and Conclusion:** It can be concluded that job reallocation within the occupational health is a logical continuation of the trends throughout the healthcare and can be implemented within a global framework. The circumstances and the local situation will eventually determine what new responsibilities under respectively OHN and OHN-P will get. This involves tailoring appointments and set up processes so that there is a continuous substantive dialogue between the members of the multidisciplinary team and continuous monitoring occurs on the care provided. The prerequisite for this is that the division of responsibilities and arrangements between OHN-P, OHN and occupational physicians are well and clearly regulated. The disciplines are complementary to each other, which means that with coordination and cooperation quality of care can be promoted.

**Key Word:** job reallocation, occupational health, occupational health nurse, occupational health nurse practitioner, occupational physician.

### 61  Tailoring workplace visits to the needs of small and medium-sized enterprises in Belgium: The role of occupational nurses

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**Topic:** Work Organization

**Background:** In Belgium, occupational nurses (ONs) mainly execute occupational health medical examinations. At Mensura Occupational Health Services, ONs can work as safety advisors performing workplace visits in small and medium-sized enterprises (<50 employees). Historically, all workplace visits were executed identically, based on one very general guideline.

**Aim:** ONs-safety advisors aimed to make workplace visits more dynamic: they want to take into account workplaces’ real occupational risks and workplaces’ already achieved levels of health and safety.

**Methods:** In 2009, a multidisciplinary workgroup (n=10) coordinated by an ON-safety advisor developed a flow of workplace visits in order to meet the companies’ needs. A general workplace visit approach, visualising the most urgent preventive needs, is recommended for all first-time workplace visits and is to be repeated at least every 5 years. In between year-1 and year-5 general workplace visits, a tailored workplace visit is recommended. A tailored workplace visit focus is chosen by the safety advisor in close collaboration with the employer. Options are: (1) the general workplace visit; (2) sector-specific workplace visits focusing on the main preventive issues known in a company’s sector (implemented in 2011); (3) theme-specific workplace visits focusing on, e.g., the theme that the Labor Inspection will prioritize...
that year (implemented in 2012).

**Results:** In the first year (2010), 100% of workplace visits were general workplace visits. In 2011, 87% of employers chose general workplace visits, and 13% chose sector-specific workplace visits. The choice of sector-specific workplace visits further increased steadily to 19%, 25% and 39% of all workplace visits in 2012, 2013 and 2014, respectively. In 2012, 3% of employers chose a theme-specific workplace visit. This percentage remained stable in 2013 and 2014.

**Conclusion:** Our work illustrates how ONs, with their very particular background of close relationships with the examined workers, are well positioned for workplace visit remodelling.

**Key Words:** workplace visit, occupational nurse, safety

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**62 The detection of psychosocial risks in Small and medium sized enterprises**

*Filip Pelgrims RN, Hilde De Raeve MD PhD, Sofie Vandenbroeck PhD RN, Belgium*

**Aim:** The detection of psychosocial risks in small and mediumsized enterprises

**Background:** A well elaborated occupational safety and health (OSH) policy is crucial, yet small and medium scaled (SME’s) enterprises sometimes fail to develop a good safety program. Idewe, a Belgian external service for prevention and protection at work, uses the online risk-assessment tool “BRIE (i.e. Better Risk Inventarisation and Evaluation) to guide occupational health nurses during periodic company visits. Brie provides, 1/ a list of important sector specific OSH issues (e.g. psychosocial), 2/ advice regarding good practices, legal information and preventive actions and 3) an evaluation of sector specific occupational risks.

**Methods:** BRIE risk-assessments were performed in a convenience sample of SME’s during the period 2013 - 2014. A selection of psychosocial factors (n=7) was assessed and scored with yes or no. Examples are: 1) Was a psychosocial risk analysis performed till date?; 2) Does the company formalized a resolution regarding unacceptable behavior in the workplace?; 3) Is there a policy addressing undesirable behavior?. Only the SME’s were all psychosocial factors were assessed and scored were included for analysis. Prevalences were calculated using frequencies.

**Results:** Data was available from 8100 SME’s (respons = 35%). About 93% of the companies, did not yet perform a psychosocial risk analysis. A resolution and a policy regarding unacceptable behavior were available in 41.5 % and 32 % of the SME’s. In 39.5 % of the SME’s the employees know who the confidential counsellor is. In 18.5% of the SME’s there was no register for unacceptable behavior and in 49% there was no alcohol and drugs policy.

**Conclusion:** Brie risk-assessments reveal that assessments and policies regarding psychological risks or unacceptable behaviour are non-existing in a significant number of SME’s. SME’s therefore need extra support, information, and advise. A well instructed OSH-nurse can use a BRIE assessment as a first step to a company policy.

**Key Word:** psychosocial risks, small and mediumsized enterprises, risk-assessment

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**65 Human Errors and Brain Health: Lessons from Neuroscience**

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**Background:** Human Errors are creating a rising risk to both personal and process safety. A recent meta-analysis of incident reports shows that as many as 80% to 90% of serious
injuries and organizational accidents have been attributed to human error. Yet, too often, organizations walk away from incident investigations that identify “Operator Error” as a root or contributing cause, and fail to make any significant changes in organizational or human reliability practices. 1Health & Safety Executive, 2012.

**Aim:** This session will demonstrate how good brain health as well as brain-centric organizational practices can significantly improve workforce health while also reducing human errors occurring in our workplaces.

**Methods:** This session draws on recent neuroscience research about how the human brain really functions, and applies this research to improving workforce health as well as organizational and process safety. Two case studies of the Brain-Centric Reliability System are presented – one in a manufacturing plant and one in an oil refinery.

**Results:** Trend analysis of Key Performance Indicators for Safety, Reliability, Productivity and Workforce Satisfaction demonstrate statistically significant improvements are possible when Brain-Centric Health, Safety & Reliability practices are implemented in our workplaces.

**Conclusion:** Work organizations can and must do more to prevent the plethora of human errors at the root of serious injuries and organizational accidents. Understanding more about the neuroscience of human errors will enable companies to make significant advances in human reliability and human error reduction.

**Key Words:** Neuroscience, Human Errors, Human Reliability

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**Title:** Building a Global Culture of Health and Well-Being

**J.K. Tomlinson, USA AAOHN/The Hartford**

**Background:** More and more companies know that healthy employees are key to successful business. Forward-thinking companies began addressing worksite disease prevention and health promotion in the 1980s. These companies were concerned about the overall health of their employees, the continual rise of health care costs and emerging evidence that changes in personal health would help employees become healthier, increase productivity and help control health care costs.

**Aim and Methods:** This presentation will be a review of relevant benchmarks and outcomes that support building a global culture of health and well-being within an organization which impacts productivity, high performance and engagement. Examples of how organizations are building a culture of health and well-being will be discussed.

**Results:** Benchmarks and outcomes will demonstrate how healthy workplaces reduce health care costs, reduce absenteeism, improve employee morale and job satisfaction, increase productivity and increase organizational effectiveness through increase employee engagement.

**Conclusion:** Developing a culture of health and well-being is the foundation for success and transcends national and international borders. Keeping employees healthy, at work and engaged in the work process is a global business goal. Occupational health professionals are in the opportune positions to identify the determinants of health and well-being, engage employees and their families in healthy behaviors, integrate cost-saving strategies, align occupational health services with business goals, attain employee buy-in, safeguard health privacy rights, address legal issues and facilitate communication and collaboration among all parties.

**Key Word:** Well-Being
Association of sociodemographic factors, work ability, health behaviour and mental health status with prolonged unemployment among young people
Kirsi Lappalainen, Senior Specialist, Finland

Background: The purpose of this study was to explore the associations of prolonged unemployment and health, lifestyle and workability risks among young people.

Aim: This study concerns the situation of the Occupational Health Counselling project in Kuopio, Eastern Finland, in 2008–2010.

Methods: The total population in this study was N=190 of young unemployed people aged 16 to 25 years. The survey was carried out in 2010. The questionnaire forms included the Work Ability Index (WAI), the Beck Depression Inventory (BDI), the Alcohol Use Disorders Identification Test (AUDIT) and the Occupational Health Counselling Survey.

Results: In multivariate analyses males had a greater risk of prolonged unemployment compared to women. Using drugs or medicines for purposes other than medical treatment was associated independently with an increased risk of prolonged unemployment. In the multivariate analysis, a low WAI (OR 2.21, 95% CI 0.95-5.13) was associated almost statistically significantly to a risk of prolonged unemployment.

Conclusion: It is important to recognise young unemployed early. This study gave indication that attention should be paid especially to males and those who have poor or moderate work ability and use drugs. These problems should be recognised at an early stage, especially by employment office professionals who can guide the young unemployed to health care services. The network with the authorities should be comprehensive and flexible in order to support young unemployed people.

Key Word: young unemployed, unemployment, health services, health promotion, network, WAI, BDI, Audit

A closed system that leaked -Improving a cap for transferring fluids between a container and vials in a closed system-
Bette Lundh, Nordsjællands Hospital, Dyrehavevej 29, Hillerød, Denmark

Background: In 2014 a total of 195,000 transfer caps were used in hospitals throughout the Region of Copenhagen. The caps are also in widespread use throughout Denmark and in many European countries.

Occasionally nurses observed a leakage when using the closed system to mix antibiotics. As a result the patient did not get the full dosage and the nurses were sometimes exposed to antibiotics. Some nurses reacted to this exposure with serious allergic reactions – one had an anaphylactic shock.

A working group was established consisting of head nurses, ward nurses, an occupational health nurse, a pharmacist, a purchasing manager and representatives from the company who produced the transfer cap.

Aim: The twofold aim was to avoid exposure to antibiotics, and secure correct dosage for patients.

The Danish Working Environment Authority requires that antibiotics are mixed in a closed system or in a Laminar Air Flow Cabinet.

The purpose of this study was to investigate why, when, and how did this leakage occur – and
to find a solution.  
**Methods:** To examine the problem, a variety of analytic models and methods included: Interviewing ward nurses at two hospitals in the Copenhagen Region, video filming nurses handling the product, and registering complaints about the product. The working group held several meetings at different places and levels to discuss the findings and test result of a new product at two hospitals.  
**Results:** Results identified the rubber membrane in two types of antibiotic vials was responsible for the leakage.  
The company has improved the product to comply with the Danish National requirements.  
The new secure product is now available in Denmark and Europe.  
**Conclusion:** It is ESSENTIAL that nurses reject and report any health hazards risks including registration of product complaints. It is possible to change things.

80 Exposure to chlorine compounds at work beside indoor rehabilitation swimming pools  
*Göte Mölleby, Departement of Occupational and Environmental Medicine*  
*Örebro University Hospital, Sweden*  
email: gote.molleby@regionorebrolan.se g.molleby@gmail.com

**Background:** Chlorination of swimming pools produces by-products as mono-, di- and trichloramines as the chlorine will react with nitrogen containing organic matter. Trichloramine is the most volatile chloramine produced in this reaction. The major route of exposure is inhalation and studies have showed that indoor swimming pool personnel suffer from nasal and respiratory symptoms. Also the lower respiratory tract is affected and an increased risk of asthma in a group of pool workers was reported (Nordberg, 2012).  
**Aim:** The aim of this study was to investigate the prevalence of respiratory symptoms among employees in ten different swimming pool facilities used for human rehabilitation training. In each of these facilities both the personal exposures to trichloramine and trihalomethanes (THM) as well as the levels in the air were measured to find dose-response association between exposure and health effects.  
**Methods:** The study population comprised 23 workers exposed to emissions of volatile by-products from chlorine used for disinfection of the pool water. Lung function was investigated using a PC based spirometry flow sensor. Nitrogen monoxide, NO, as an indicator of primarily eosinofilic inflammation in the respiratory tract was investigated using NIOX-Mino. The measurements were performed before and after a work shift.  
**Results:** The geometric mean (GM) for trichloramine exposure was 20 µg/m³. Chloroform was the dominating THM and varied between 0,25-41 µg/m³. The exposure levels of trichloramine were lower than the levels associated with health effects in other studies (Fantuzzi, 2013). The exposure levels for THM were far below the Swedish Occupational Exposure Limit of 10 000 µg/m³. Normal spirometry and NO levels were determined. No dose-response effects were noticed.  
**Conclusion:** The spirometry and NO results were normal and did not show any significant changes. No dose-response effects were noticed. The exposure was lower than expected, which may explain the results.  
**Key Word:** Effects of Hazards (physical, chemical, ergonomic)
References: Nordberg et al. Lung function in volunteers before and after exposure to trichloramine in indoor pool environments and asthma in a cohort of pool workers. BMJ Open 2012; s:e 000973

81 Effective, efficient and adequate communication
Kim Rooijackers MSc, psychologist and Erik Schuurman BSc, cognitive behavioural trainer, Winnock, the Netherlands
Introduction Communication between people, can sometimes lead to misunderstanding each other. Especially when people try to convince each other and when there is a lot of arguing and discussion, you have probably end up into the Drama Triangle.
The Drama Triangle will lead to frustrations for all participants and causes a lot of problems and misunderstanding in communication.
In communication we differentiate verbal and non-verbal components. People are responding for 85% to non-verbal components (physical non-lingual signs of the other) and for 15% to verbal components. A smile or an angry face, posture and attitude, the sound of our voice, in communication, it all matters!
The Model of Rosch
This model has been developed to understand and to overcome difficulties and pitfalls in changing from non-constructive communication (the Drama Triangle) to constructive communication (described in the Empowerment Triangle). Both triangles are described by transactional analysis.
As part of the Model of Rosch, the auteurs describe the dynamic that is needed to develop an adequate relation build on trust and the intention to cooperate in the Present (Here and Now). In the Meeting Triangle issues according to under laying motives for getting into the Drama Triangle, can be discussed without getting into disagreement and frustration. In the Present we can accept the past and put our frustrations in perspective of our under laying needs that has been ignored by ourselves and the others. The only purpose of this Meeting Triangle is to develop a constructive working relation by listening to the experiences and beliefs of the patient without moral judgement. That requires an attitude to keep an open mind an avoid moral judgement and to communicate with each other on a level of equality, appreciation and respect for the behaviour of the patient.

87 A Forgotten Story of Europe’s First Factory Nurse Training
Henriett Éva Hirdi, Chamber of Hungarian Health Care Professionals, Budapest
Background: Occupational health have a long lasting tradition in Hungary. The first miners’ hospital was founded in Selmec, in the Kingdom of Hungary, in 1224. The earliest known document regarding industrial health nursing in Hungary shows that in 1883 a nurse, named Mária Csermák cared for Rudabánya ore
miners and their families. To date in Hungary, there has been no systematic review of the literature on history of Hungarian nurses’ professionalization.

**Aim:** The purpose of this presentation is to introduce the origin of specific education for the occupational health nurses in Hungary, which fell into oblivion by this time.

**Methods:** The research method was a holistic data gathering in which domestic 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 in 2013, 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 factory nurses developed by Dr Mária Baloghyn (1895-1970?) secondary school teacher. The first factory-nurse course has been started in 1933 in Budapest. Participants of the course had to suit strict admission requirements. The two-years full-time (45 hours per 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.

**Conclusions:** It has been stated that OH nurse education has an 80-year-old history in Hungary that throw new light upon theories until now about origin of OH nursing education.

**Keywords:** occupational health nursing, education, history

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**Wearable HAV management**

*Nicholas Molloy, Edinburgh, UK*

**Background:** Over 300,000 people in the UK alone suffer symptoms from exposure to harmful levels of vibration exposure in the workplace. The HSE state over 2,000,000 people are at risk from high levels of exposure and the highest numbers of employment disability claims are due to this type of exposure. Employers are still failing to protect workers due to lack of compliance or accuracy of risk assessment and therefore actions to address them.

**Aim:** To help employers comply with 2005 EU vibration exposure regulations and reduce the high level of inaccuracy from the process of worker protection. To simplify and reduce the inaccuracy of risk assessments and ongoing risk reduction activity’s to improve worker welfare.

**Methods:** Use integrated wearable & web technology to monitor and report to all stakeholders’ efficiently and accurately, a representative measure and source of vibration risk, so employers can reduce and design out exposure risks as required by EU regulations. The solution monitors the actual wearer’s vibration from work related activities to calculate exposure levels and alerts the wearer of exceeding pre-set exposure levels. Data is transmitted online and provides duty holders access to information to help reduce risks.

**Results:** It provides a personalised exposure risk management system that supports worker behavioural change towards vibration risks. Online access to data now involves all duty holders not possible before. Employers better understand the source of exposure and how to address it via tool use, work rotas and project delivery. Workers are also remaining below legal levels of exposure.

**Conclusion:** More workers are now better protected due to the reduction of vagueness in assessing risks. The ability to now easily measure risk reduction activity. Greater awareness of exposure risks and related tool use. More stakeholder involvement which expedites risk reduction and removal. Data is used for Business Information Modelling to design out risks longer term.

**Key Word:** Vibration risk reduction, Vibration White Finger, 2005 EU regulations for vibration in the workplace support, behavioural change, Occupational health, wearable health technology.
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Promoting tobacco cessation: a nurse-led program
Laura Jacobs, Group Idewe, Leuven, Belgium

Background: According to the latest World Health Organization (WHO) Report on the Global Tobacco Epidemic, in 2013 the prevalence of smoking in Belgium was 19.9% for women and 26.2% for men. Even though there is a modest downward trend, Belgium still follows the European average smoking prevalence of 28%.

Aim: In recent years, we have more employers actively seeking help to promote tobacco cessation among their employees. Employers consider the smoking ban for workplaces (2009) and the prospects of an ageing workforce, an opportunity to detect and reach current smokers in the workplace.

Methods: In 2013, Idewe, the largest Belgian external service for prevention and protection at work, decided to further invest in health promotion. Besides smoking, we also developed programs regarding a healthy diet, alcohol and drugs, stress and physical activity.

In order to support the employees, we developed a new approach for smoking cessation. Therefore a multidisciplinary composed of two occupational health nurses, a psychologist, an occupational health physician and an expert in health promotion was created. Four team members were licensed tobaccologist. First, the team identified essential items of a smoking cessation program during a brainstorm session. Next, these items were then positioned within the Transtheoretical Stages of Change Model of James Prochaska and Carlo DiClemente (1983).

Results: The nurse-led program consists of an introduction session and 4 additional sessions. The objectives are to give employees insight in their smoking habits and offer information on how to quit.

Our flexible program provides an opportunity for all types of workplaces to invest in tobacco prevention. With our complete package of health promotion, we are able to assist smaller and larger workplaces.

Conclusion: By investing in a tobacco cessation program, employers can help their employees to quit smoking and, thereby, assist in improving employees’ health and decreasing various inherent costs.

Future research will evaluate the effectiveness of our program and the satisfaction of employers and employees.

A Young Worker with Hand Eczema Symptoms: An Analyzing Of a Case Study by Using Computerized OMAHA System
Emine AKTAŞ¹ M.N. ESİN²
¹MSc, Lecturer, Istanbul University Florence Nightingale Nursing Faculty, Public Health Nursing Department
²Professor, Istanbul University Florence Nightingale Nursing Faculty, Public Health Nursing Department

Background: Eczema is the most frequent occupational skin diseases (OSDs) in many industrialized countries. The studies about OSDs on young working were limited and not used standardized methods. Omaha System(OS) is one of the most suitable classification systems in nursing. Evaluating the effectiveness of OHN interventions by using OS can be an example for planning care in a specific case such as a young worker with hand eczema(HE).

Aim: To analyze the nursing care of a case study of a young worker by using computerized OMAHA system.
**Methods:** The data were evaluated according to OS’s three components: Problem Classification Scheme (PCS), Intervention Scheme (IS), and Problem Rating Scale for Outcomes (PRSO). PCS consist of 42 problems with associated signs/symptoms. The IS has a list of 75 targets that can be used with any of the four intervention categories; Training/Monitoring/Consulting (TMC), treatments and procedures (TP), Case Management (CM), and Surveillance (S). In this study, we used computerized OS named Turkish Nightingale Notes (T-NN) to report care plan.

**Results:** We report the case of a 19-year old young worker and had been working as an apprentice in a hairdresser saloon for 3 years. He approximately works 12 hours in a day. He did not use gloves, and any moistures for hands. His skin was very dry and cracked. During the last 3 months, he started to contact hair dye, and his hands become very itchy and red, and have pain in his palm. Three actual problems were identified; “Skin”, “Workplace Safety” and “Pain”. The all IS categories, mostly TMC were identified for interventions. The PRSO rates of knowledge, behaviour, and status were more likely to show higher level after implementing the interventions for each problem.

**Conclusions:** The computerized OMAHA system can be used and effectively by occupational health nurses in practice and research for identify of OSDs.

**Reference:** Martin, KS. The Omaha System: A Key to Practice, Documentation and Information Management. 2005; (2nd ed.) St. Louis: Elsevier.

**Key Words:** Computerized Omaha system, hand eczema, skin diseases, young worker, occupational health nursing

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**12 Implementation and evaluation of a health education programme on school safety and hygiene by a school nurse.**

*Niki SYROU, Ioannis ELEFSINIOTIS, Athena KALOKAIRINOU, Panayota SOURTZI*

*Department of Public Health, Faculty of Nursing, National and Kapodistrian University of Athens*

**Background:** The main role of schools is education and learning but also the promotion of health for teachers, students and their families as well as the development of safe school environment.

**Aim:** The aim of the study was to investigate the effectiveness of a health education programme on teachers’ knowledge, attitudes and behavior on school safety and hygiene.

**Methods:** The study was organised as a quasi-experimental with two groups - intervention and control. The total sample of 405 teachers, intervention (n1=224) and control (n2=181), was drawn from a stratified random sample of 42 primary schools (37% of the total) in a provincial prefecture, from October 2011 to April 2012. Data were collected via a self-reported questionnaire from the teachers and observation by the principal investigator. *Data analysis* was performed by SPSS 22.0 at ≤ 0.05 significance level.

**Results:** After the intervention, increase of knowledge and improvement of attitudes of the teachers in the intervention group was found in comparison to those in the control group. Also, in the intervention group it was found greater increase in knowledge and development of more positive attitudes and behavior after the intervention than before.

**Conclusion:** The results showed the positive outcome of the intervention for the teachers who participated in the health education programme. It is recommended the routine planning, implementation and evaluation of health education programmes for teachers as well as the systematic control for risk factors.
Supporting employees with musculoskeletal pain at work
Eleni Grana, Besmira Kruja, Krikella Alkinoi (MD) Occupational Health Nurse, COSMOTE S.A
Athens, Greece

Background: Musculoskeletal disorders cover a wide range of health problems and are directly related to the type of working position and posture throughout the day. Most frequent MSDs are pain in the spine; cervical syndrome, lumbar pain, degenerative lesions, tendonitis and joint pain mainly of upper limbs. The main causes and risk factors are strenuous posture, repetitive movements, direct mechanical pressure on body tissues, working methods and socio-psychological work factors.

Aim: The purpose of this study was to support the employees with MSDs in order to reduce physical strain during work, increase wellness and quality of life at work, reduce absenteeism due to MTO and finally increase productivity.

Methods: Employees at a large company were trained individually or in groups for adopting the right posture while working with a computer, and in manual handling. Written information in the form of leaflet was distributed. If needed, the employees were issued with ergonomic seating facilities and were provided with financial support so as to attend to fitness classes in collaborating gyms or participate in the company’s facility. Musculoskeletal symptoms were evaluated by a self-assessment questionnaire and relevant absenteeism was recorded. In addition, the occupational physician could issue following evaluation of medical record, change in working position, in order to create safe conditions for the employee.

Results: Improvement of quality of life in the workplace and increased productivity due to incidents based on annual measurements of absenteeism and in total days of sickness absence was found. The total incidents as assessed by absenteeism have been decreased about a half in a yearly basis.

Conclusion: Employee training and support from the company’s occupational health nurse/physician can reduce absenteeism, increase productivity and improve the quality of life.

Key Word: employee, musculoskeletal disorders, absenteeism, wellness, workplace.

Cross correlation study of rotating shift work and quality of sleep with the syndrome of irritable bowel in health care
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Background: Irritable bowel syndrome (IBS) is a chronic functional disease of gastrointestinal system, with recurrent abdominal pain or discomfort, directly connected to disturbances in defecation and unexplained by structural abnormalities. Deregulation of 24-hour biological rhythms, combined with work-related stress and possible infection and irregular reception of meals, influence IBS and the quality of sleep, as well.

Aim: to investigate the association of rotating shift work and the quality of sleep with the appearance of IBS in health care professionals.

Methods: 162 nurses, in hospitals of the 6th Sanitary Region of Peloponnese filled in three questionnaires [1. Pittsburgh Sleep Quality Index (PSQI), 2. Irritable Bowel Syndrome Quality of Life Instrument (validated in Greek), 3. Rome III-IBS module (translated in Greek following the Guidelines of Rome Foundation Material)]. Pilot tests of face and content validity were carried out. The final version was tested for construct validity and dimensionality with exploratory and confirmatory factor analyses and test for correlations between factors. Reliability was
examined in terms of internal consistency by Cronbach’s Alpha, item-to-total correlation, and item-to-item correlation. Drop out analyses was carried out. Comparison analyses were carried out to explore characteristics of respondents with shift work, predicting level of depression symptoms and possible correlation to the level of quality of sleep or to the criteria of sub-diagnosis of IBS.

**Results:** 6% of nurses claims that is diagnosed with IBS, while 1% suffers from IBS without knowing it. Nurses with IBS have worse quality of sleep compared to those, without. Possibility of existence of IBS is high when quality of sleep is bad. Nurses with circular schedule of work have 3.19 times greater possibility to suffer from IBS compared to nurses without IBS. PSQI showed that: Nurses with circular schedule of work have significantly worse quality of sleep compared to nurses with morning shifts. In nurses with IBS when the quality of life is bad there is also a bad quality of sleep.

**Conclusions:** rotating shift work may cause IBS in nurses, as well as bad quality of sleep and life. IBS is a basic reason for absence from work and high health care costs. Shiftwork must constitute a field of study for the reduction of harmful psychosomatic complications in health care professionals.

**Key words:** irritable bowel syndrome, shift work, sleep quality, quality of life.

**References:**


17 The relationship between job satisfaction and health of Greek nurses.  
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**Background.** Employee job satisfaction and its relationship with health and quality of life has been an issue of major concern over the last decades. Nurses experience difficult working conditions which affect their job satisfaction, health and quality of life.

**Aim.** The investigation of the degree of job satisfaction of nurses working in public hospitals and primary health care centres in Greece and its relationship with their health related quality of life.

**Method.** A cross sectional study was undertaken in three general hospitals and their respective health centres. Stratified random sampling by level of education was used and 508 nurses and nursing assistants were included. A self-administered anonymous questionnaire including the Measure of Job Satisfaction, the SF-36, demographic, education and work conditions data, was used.

**Results.** Greek nurses were found dissatisfied with their job according to the total score of the job satisfaction scale, although, personal satisfaction and satisfaction with support had had
higher scores. Their general health was reported as average, because of physical and mental health problems, low vitality, low energy and increased physical pain. A positive, although weak, linear correlation between job satisfaction and health related quality of life was found. **Conclusion.** Although Greek nurses are not satisfied with their work, those with high levels of job satisfaction had better health related quality of life. Findings suggest that the improvement of the work environment would contribute to a healthier and more satisfied nursing workforce.

**18 Nutritional intervention to support employees’ weight loss**

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**Background:** Overweight and obesity are major risk factors for a number of chronic diseases, including cardiovascular diseases, diabetes, sleep apnea, breathing problems, musculoskeletal disorders and cancers. Other consequences are low quality of life, difficulty with physical functioning, increased health care costs, decreased productivity, as well as premature mortality and disability.

**Aim:** The promotion of healthy eating habits in combination with physical activity and the reduction of the number of overweight and obese people in a company, so as to improve their quality of life, wellness and productivity.

**Methods:** The program started in 2013 and still continues. The employees that volunteered to participate (N=207) were divided into three groups in accordance with their Body Mass Index, after having examinations and being assessed by the Occupational Health team. Each group participated in appropriate interventions that included individualized nutritional programs and weekly measurements. Moreover, vending machines at work and the nutritional menu of the catering company were appropriately modified.

**Results:** The program was effective for the employees that were determined to lose weight and change their eating habits. Some of them managed to change the BMI category by losing weight and for a few of them the average weight loss was 10 kg. Some employees still continue trying while three employees had bariatric surgeries with excellent results. However, the majority of the employees did not comply with the instructions and did not participate in the measurements in the frequency that was requested, therefore they did not have a significant weight loss.

**Conclusion:** Dietary intervention programs can help employees to adopt healthier eating habits, lose weight and improve their quality of life and productivity. The key to success is the individual’s determination and willingness, as well as the employer’s sensitization for the implementation of the program.

**Key Word:** Nutritional Intervention, nutritional programs, employees, weight loss.

**19 Midwives Burnout – A Review and Personal Perspective from a Greek Midwife**

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**Background:** Burnout of healthcare workers is a globally reported issue; the current economic crisis and severely restricted healthcare provisions in Greece further compound this problem.
Aim: The purpose of this paper is to investigate the issue of midwives burnout.

Methods: A review of the literature is used with the perspectives of a Greek Midwife working in a district Hospital in Greece.

Results: It is found that there are several root causes of burnout including inadequate resources, long working hours, limited opportunities for development and poor quality of management.

Conclusions: The program of austerity measures are expected to continue with, unfortunately, little sight of the funding or conditions required to improve health care provisions in Greece. This is expected to lead to an increase in the burnout of health professionals, including midwifery staff, thus reducing the ability of the Greek National Health Service to provide high quality care to mothers and newborns.

Key Words: Midwives, Burnout, Greece, Financial Crisis


20 Colorectal Cancer Knowledge, Health Beliefs and Behaviours of Food Industry Workers in Turkey

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Background: Colorectal cancer (CRC) is one of the most leading health problems in the world. Screening tests can prevent the majority of the colorectal cancers. With the rise of industrialization, a significant increase in CRC has been found in industrial societies. Worksite is the best place to promote CRC prevention and screening awareness. Occupational Health professionals must determine the workers’ health beliefs, and behaviours on CRC.

Aim: This research was conducted as a descriptive study for the purpose of determining the health beliefs and preventive health behaviours on CRC of food industry workers in Turkey.

Methods: One hundred and twenty eight workers were included in the study sample. Data were collected the Colorectal Cancer Knowledge Form and the Colorectal Cancer Screening Attitudes-Beliefs Scale.

Results: The mean age of the participants was 32.6±10.9, the mean working years was 6 years. Most of the participants (%60.2) were women. Smoking in the employees were %47.7, regularly physical activity was only %19.5. While having a knowledge on CRC was %6.3; screening participation was %9.4. Colorectal cancer knowledge status and beliefs were very low according to the Colorectal Cancer Screening Attitudes-Beliefs Scale. The rate of the workers having at least a gastrointestinal problem was %68. In the study %12.5 of the employees have a history of CRC in the family, and %19.5 have a cancer history except CRC in their family.

Conclusion: Health promotion programs in the worksite are an effective way to promote awareness and prevention of CRC. Health promotion programs such as “A colorectal cancer prevention program” not only learn how to prevent CRC but also improve health and well-
Women's Employment and Being Exposed to Psychosocial Risks in Turkey

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Background: Women workers are forced to work, mostly in the informal sector, part-time, without job security and at low wages. This has a negative impact on women's employment and causes psychosocial risks and also leads to significant public health problems. Psychosocial risks are defined as “new and growing” risks of occupational health and safety.

Aim: The aim of this study is to investigate the employment opportunities of women in Turkey and their exposure to psychosocial risks in accordance with the literature.

Methods: Our study examines the research on the problems to which the working women have been exposed over the years between 2010-2015. The research is based on the results of 2014 Turkish Statistical Institute (TSI) women's studies. The female labor profile in working life in Turkey is assessed in accordance with the TSI data.

Results: Women constitute 49.8% of the population in Turkey. Female labor force participation is 30.3% and employment of women is 26.7%. 33% of women participating in the employment work in agriculture, 17.1% work in industry and 49.9% work in services sector. The most common identified risks are psychosocial, ergonomic, chemical, physical and biological, respectively. Psychosocial risk factors, respectively, mobbing, discrimination (gender), harassment, pregnancy, and varying fundamental rights in breastfeeding due to employer’s initiative and working hours (especially shift work) are the most common factors creating maximum stress on women, causing burnout and affecting the quality of life negatively. Studies show strong correlation between job stress, depression, anxiety and somatoform disorders. In addition, work-related stress is a major problem in the increase of accidents. Psychosocial hazards cause stress at work and work-related stress leads to physical and psychological diseases.

Conclusion: Women’s participation and employment in labor force is a key element for sustainable development and it is considered in a special risk group in working life. Female employment should be increased by making legal regulations and implementation of these. Job security must be ensured, legal regulations which protect workers from work place risks must be brought to European Union standards. Especially legal measures against mobbing, to which women are exposed most commonly, should be implemented in practice and the results should be evaluated. However, risk assessment explanations about how to determine psychosocial risks in the relevant documents and guidelines are quite limited and insufficient. It is controversial to which extent it would be possible to minimize especially the risks women are exposed to. Another major issue is that who will manage and assess the psychosocial risk management within the organization.

Keywords: female workers, working areas, Turkey, psychosocial risks, occupational health and safety
of society by collecting data from individuals, households, workplaces through surveys and censuses in the areas where the country needs and then it converts the data to statistical information by analyzing it.

22 Cleaning Industry Employees' Perception of Health and Health Responsibilities
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Background: Internal processes such as perception of health, health responsibilities, self-sufficiency and awareness of one's own health are shown to influence health. Occupational health nurses should identify and take relevant measures to improve employees' perception of health and health responsibilities.

Aim: Identification of cleaning employees' health responsibilities requires the determination of influencing factors.

Methods: The study was designed descriptively and conducted in June-August 2015 including 657 employees employed by a private cleaning company based in Istanbul. The population had a mean age of 37.50±9.23; 50.1% of them were female employees and 49.9% were male. The research data were collected out of socio-demographic characteristics identification form consisting of 17 closed-end questions, Perception of Health Scale (α=0.63-0.76; min=15, max=75) and Health Responsibility Scale (α=0.77, min=9, max=36). The data were evaluated using descriptive statistics, Pearson correlation and Kuruskal-Wallis Variance analysis as well as t-test for independent groups.

Results: The employees scored 47.87±5.56 on average in the overall Perception of Health Scale, 15.06±3.34 in the Center of Control, 11.95±3.38 in “Certainly”, 10.25±2.71 in Self-Awareness sub-dimensions. They scored 21.22±5.68 in health responsibility scale. Individuals with higher educational background, those aware of the health risks associated with the job and those taking protective measures against such risks had higher scores of the Perception of Health Scale (overall) and Center of Control (sub-dimension), which were statistically significant (p<0.05). Individuals content with their income and those who perceived their overall health as "very good" displayed higher “Certainly” (sub-dimension) scores (p<0.05). Average score of Health Responsibility Scale was found high on a statistically significant level among the employees not working in shifts, non-smokers and patients with chronic diseases (p<0.05).

Conclusion: Employees' perception of health is related to the educational background, income level, awareness of occupational risks and taking measures whereas health responsibilities were found associated with income level, working in shifts and chronic diseases.

Key Word: Cleaning Employee, Perception of Health, Health Responsibility, Scale, Occupational Health Nurse

23 An Intensive Care Unit Nurse with Musculoskeletal Disease: A Case Study by Using Computerized Omaha System
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Background: The occupational musculoskeletal symptoms in intensive care nurses is very high.
Omaha system (OS) is used effectively to recognize occupational health nursing (OHN) in research and practice, allowing the evaluation after nursing interventions in a standardized and computerized concept. The system might be understood and used more effectively in OHN practice by discussing specific cases which are selected from the working community.

**Aim:** This study is conducted as a case study to investigate the occupational musculoskeletal symptoms of an intensive care nurse by using computerized OS.

**Methods:** An intensive care unit (ICU) nurse is assessed by “Rapid Upper Limb Assessment” measuring tools. The three components of OS, “Problem Classification Scheme (PCS)”, “Nursing Intervention Scheme” and “Problem Rating Scale (PRS)” for outcomes were used. The assessment is made by using Turkish Computerized version of Nightingale Notes Software.

**Results:** We analyze an ICU nurse who is 28 years old, working in four years as a nurse. She is not doing regular exercise and her working schedule is irregular with shifts 08.00-16.00/16.00-08.00. She did not attend to any ergonomic prevention programs. Six problems are identified as follows neighborhood/workplace safety, mental health, pain, neuromusculoskeletal function, physical activity and healthcare Supervision, then nursing interventions are applied and nursing outcomes are evaluated. The knowledge, behavior and status on PRS was “minimal knowledge”, “rarely appropriate behavior” and “extreme signs/symptoms”, respectively, for the “Pain” problem. Teaching, guidance and counseling, Case management, and Surveillance interventions are applied and the nursing outcomes are improved as being “adequate knowledge”, “appropriate behavior” and “severe signs/symptoms”.

**Conclusion:** The computerized OS can be effectively used in OHN research and practice to identify ergonomic problems and related factors.

**Keywords:** Omaha system, intensive care unit nurse, musculoskeletal disease, occupational health nursing.

**References:**

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**24 The Job Stress, Depression and Headache among the Bank Employees**

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**Background:** Generally headache is caused by stress, depression, lack of sleep financial and emotional problems.

**Aim:** The study was carried out to determine the job stress, depression and headache among the bank employees.

**Methods:** This descriptive study was carried out at a bank in Istanbul with 193 bank employees between November –January 2014. Data were collected by the demographic questionnaire, Beck Depression Inventory (BDI) and Job Stressors Scale (JSC). Verbal approvals of the volunteers are taken. Mann-Whitney U, Kruskal Wallis tests were used to evaluation of data.

**Results:** It was found that 69.4% of the participants was woman, 40.4% of them was between ages of 25 and 29. It was found that 75.6% of them were graduated from college, 58.5% of them were single, 33.2% of them were using alcohol, 89.1% of them were suffering from headache and 41.5% of them were often suffering from headache for 2 or 3 times a week, 40.4% of them were using painkillers.

It was found that JSC score of participants was 50.27±5.37 (min:37, max:88) and BDI score was 9.07±7.01 (min:0.00, max:34). Job Stressors Scale score of people who suffer from headache was 50.03±4.56 (min:37, max:61) and BDI score was 9.39±6.93 (min:0.00, max:34).
A significant difference was found between having headache and BDI score (Z:-2.319, p<0.05) but there was no significant difference between having headache and JSC score (Z:-0.708, p>0.05).

**Conclusion:** Beck Depression Inventory scores of people who suffer from headache were found higher than people who don’t suffer from headache (9.39±6.93 via 6.42±7.29). Job Stressors Scale scores of people who suffer from headache were found less than people who don’t suffer from headache (50.03±4.56 via 52.28±9.71).

**Key words:** Bank employees, job stress, depression and headache

25 Perception of Stress and Stress Management among the Front Liners at a Private Company

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**Background:** Stress adversely affects the business life alongside physical and psychological health. Given these effects, it is of utmost importance to measure and demonstrate stress for its quantification.

**Aim:** The study aims to identify the perception of stress and stress management as well as influencing factors among the front liners.

**Methods:** This descriptive study included 1098 front liners employed by a private company based in Istanbul and was conducted between June and August, 2015. It was completed with 820 volunteers who were not on a vacation. 80.1% carried out cleaning, 10.4% security, 4.4% technical support, 4.0% catering and 1.1% landscaping jobs. The employees had a mean age of 36.00±9.65. The company and the employees gave their consent. Data collection tools consisted of the socio-demographic form, Perceived Stress Scale (α=.87; min.=0, max=40) and Stress Management Inventory (α=.80; min.=8, max. =32). Mann-Whitney U, Kruskal Wallis tests were used to evaluation of data.

**Results:** The employees scored 13.46±6.97 on average in the Perceived Stress Scale. Perception of stress/discomfort displayed an average score of 8.66±4.45 whereas the average perception of low self-sufficiency was 4.80±3.25. Their average Stress Management Inventory score was 19.08±4.97. Those employed in catering jobs had a higher perception of stress/discomfort than others, which was found statistically significant (p < 0.005). Those aware of the health risks associated with the job had significantly higher scores of both perceived stress and stress management than the employees with a lower level of awareness (p < 0.005). The employees without protective measures against such risks displayed significantly higher scores of perceived stress, perception of stress/discomfort and inadequate self-sufficiency sub-dimensions (p < 0.005). Those reporting insufficient training about protective measures had significantly higher scores in perceived stress (overall) and perception of stress/discomfort (sub-dimension) (p < 0.005).

**Conclusion:** Employees scored higher than average in terms of perception of stress and stress management.

**Key Words:** Perception of Stress, Stress Management, Front Liners
The Healthy Lifestyle Behaviours of University Staff
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Background: Promotion of health is described as improving individual’s own health and increasing the power of control over their health.

Aim: This research is done for identifying healthy lifestyle behaviour of university staff.

Methods: This research, which is descriptive, is done between April-May 2015 at a state college in Istanbul. Number of college staff is 1600. Four hundred one people who agreed to participate are created the sample of the research. Data are collected by socio-demographic form and healthy lifestyle behaviors scale (HLBS) which was developed by Walker and is composed of 52 items. Verbal approvals of the volunteers are taken. Mann-Whitney U, Kruskal Wallis test were used to evaluation of data.

Results: The mean of the participants are 36.31±8.94 and %50.9 of them are women. Mean height of them is 168±9.33, mean weight of them is 70.80±13 and BMI is found as 24. Eighty percent of them are academic staff and 97.3% of them work full time, 85.8% of participants doesn’t have any chronic diseases, 74.1% of them doesn’t smoke and 76.8% of them don’t use alcohol. As the same time 33.2% of participants often suffers from headache in last six months, 49.9% of them uses painkillers when they have a headache. And also 75.6% has healthy eating habits, 77.8% of them eats 3 times a day, 28.2% of them has a check up each year.

Healthy Lifestyle Behaviours score of participants is found as 127.83±21.57 (min:79, max:198). There is a significant difference between HLBS scores and gender (Z:-4.361, p<0.05) and smoking (Z:-3.005, p<0.05). There is no significant difference found between being academic or managing staff and HLBS scores (Z:-0.061, p>0.05).

Conclusion: It is found that being academic or managing staff doesn’t effect having healthy lifestyle behaviour.

Key words: Healthy lifestyle behaviors, university staff

The characteristics of pain suffered by office workers and their methods of coping with pain
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Introduction: Working passively throughout the day leads at the same time to many health problems, one of which is pain.

Purpose: The purpose of this study is to determine the characteristics of the pain office workers at a workplace in Istanbul were experiencing and the methods they used to cope with this pain.

Method: A descriptive study, this research was conducted at a workplace in Istanbul over the period February-April 2014 with 88 office workers who presented with pain at the health office. Data were collected while the respondents were experiencing pain by using a pain assessment form that the researchers had prepared. Descriptive statistics were used in the analysis of the data.

Results: Of the individuals applying to the health office with pain, 51.1% were women and 48.9% were men. Out of the group, 54.6% complained of head-neck pain, 23.9% of back pain
and 13.6% of pain in the shoulder area. Of the office workers, 38.6% described their pain as tingling, 29.5% as throbbing pain while 27.3% complained of pressure. Together with the pain, 59.1% stated that they experienced limitations in their movements, 33% complained of general fatigue, 27.3% of dizziness and 18.2% of nausea. The workers said that the pain they experienced adversely affected their work (72.7%), their productivity (45%) and concentration (50%). They expressed the reason for the pain they experienced as tiredness (44.3%), stress (35.2%) and the hectic pace in their lives (33%). It was found that 87.5% used analgesics to cope with pain. Among the analgesics the workers took were Paracetamol (26.1%), Flurbiprofen (26.1%), Diclofenac (21.6%) and Naproxen (18.2%).

**Conclusion:** Office workers are frequently beset by head-neck, back and shoulder pain and often take analgesics to cope with the pain. It is recommended that office workers be taught non-pharmacological methods of coping with pain.

**Key Words:** Pain, office workers, coping with pain

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**Occupational Risks for Nurses in the Orthopedic Operating Room**

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**Background:** Orthopedic operating room (OR) nurses are known to be at higher risk for occupational hazards among health care professionals.

**Aim:** The review paper is focused to discuss on occupational risks for nurses in the orthopedic OR.

**Methods:** It was examined the literature on this topic.

**Results:** A literature review was revealed an information about several potential occupational hazards for those nurses. The most of research findings are focus on blood-borne pathogens, harmful chemicals, physical stress, and radiation. Because of concern regarding potential infection, the use of personal protective equipment is critical. Double gloving has been found to be more effective than single gloving for preventing exposure to these pathogens. Anesthetic gases pose minimal risk to the nurses who work in the orthopaedic OR. Physical stress remains an area of concern for nurses in orthopaedic OR nurses. Prolonged standing, demanding physical activity, and long work hours may lead to increased complications such as ergonomic problems. Occupational exposure to radiation in the orthopaedic OR is another cause for concern for the nurses. However, the use of preventative strategies, including proper lead protection, contamination control, and the use of dosimeters, can minimize the risk of exposing the body to a harmful level of radiation.

**Conclusion:** The body of literature reviewed in this document validates the concerns regarding occupational risks for nurses in the orthopedic OR. It is meant to be a resource, for those people exposed to these risks, to understand the risks and choose the best method or product to address their needs.

**Keywords:** Occupational hazards, occupational risks, operating room nurses

**References:**


Fieldwork to determine the problem solving abilities and motivation of Turkey’s mobilized civil defense employees and their exposure to mobbing

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Aim: The aim of this study is the problem solving abilities, exposure to mobbing and the motivation levels of Turkey’s employees serving in civil defense and mobilization.

Method: The research is descriptive fieldwork. Of 900 people, 619 participated voluntarily in an event organized for the research by an association of civil defense experts. The tools used for collecting data were the Personal Information Form, the Perception of Mobbing in the Workplace Scale, the Problem Solving Inventory and the Motivation Scale. The overall Cronbach’s alpha value was found to be 0.89 for Problem Solving Inventory, 0.95 for Perception of Mobbing in Workplace Scale and 0.90 for Motivation Scale.

Results: It was found that the participants’ problem solving abilities are high, and while nearly half of them are exposed to mobbing, most of them has high levels of motivation. It was also found that there is no significant relationship between the sub-dimensions perception of problem solving abilities and mobbing. There is a significant positive relationship among the sub-dimensions of mobbing. It was found that there is no relationship between the sub-dimensions of perception of problem solving abilities and mobbing. The more participants feel competent about their problem solving abilities, the greater the need for motivation, success, relationship and power. Among the sub-dimensions of mobbing and motivation, there is a high positive correlation.

Conclusion: It was found that when mobbing increases, motivation decreases, while the perception of self-competence increases motivation. Training in problem solving to increase motivation, and information on what to do in cases of mobbing should be provided.

Motivation and perceptions of nurses concerning lifelong learning and continuing education

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Background: The development of human resources is now based on knowledge management, main feature of which is the lifelong learning and continuing training.

Aim: To investigate the motives of participation of nurses in Continuing Education Programs as well as their perceptions about the necessity of these programs in Continuing Nursing Education.

Methods: In our study 475 nurses working in selected hospitals of Athens and region participated. Data was collected using the scale PRS.

Results: The majority of nurses were female (89.3%), 53.3% were graduates of Technological Education, only 7.4% were Master’s degree graduates while none held a doctorate. Nurses, at a rate of 45.3%, believe that participating in Continuing Nursing Education Programs, they could best meet the needs during the exercise of the nursing profession. Regarding the capability of nurses to meet the expectations of patients with continuing education, nurses responded positively in rate of 45.1%. Regarding the question if they have increased the potential benefits for family and friends, 37.7% of nurses responded positively. The lack of information and encouragement from managers, lack of staff, high cost,
family obligations, distance and lack of time seemed to be barriers in monitoring Continuing Education programs heavily.

**Conclusions**: The majority of the sample shows positive perceptions and attitudes on design of Continuing Nursing Education Programs based on real needs.

**Key-words**: Continuing Education, nurses, motivation, perceptions


### 33 Factors that influence occupational stress in Greek workers

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**Background**: Available evidence suggests that health is at risk in times of rapid economic change¹. A growing number of Greek workers are exposed to precarious employment experiences representing a potentially significant occupational health risk. Standard full-time permanent jobs are being replaced with different forms of non-standard work arrangements, many of which are characterized by stressful psychosocial working conditions².

**Aim**: The objective of our study was to investigate the factors that influence occupational stress in Greek workers during the current period of economic recession.

**Methods**: The Greek version of the Occupational Stress Questionnaire, a valid tool designed to assess the stress experienced by work personnel in any area of production³, was administered in 424 healthy workers. Occupational stress dimensions were compared between permanent and non-permanent personnel using parametric and non-parametric tests.

**Results**: Workers’ perceptions about stress in their work did not differ significantly between men and women (p=0.862) but was significantly different between workers of different employment status (p=0.013) with temporary service agreement workers reporting higher perceived stress than permanent and fixed-term workers. Workers who had a fixed-term contract perceived their work environment more negatively than permanent employees (p=0.003). Finally, permanent public sector employees reported a higher need for interventions in their job (p<0.001).

**Conclusion**: The OSQ was used to investigate the occupational stress experienced by Greek employees in the current economic crisis climate. The results suggest an association between temporary employment status and psychological morbidity.

**Keywords**: Occupational stress, Greek workers, factors

Insomnia problems in Greek hospital nurses before the referendum
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Background: When someone remarks that had a good night’s sleep, makes a statement about subjective sleep quality and lack of disorders. The aim of this study was to measure sleep disorders and insomnia problems in nurses working rotating shift system as measured subjectively by self-reported questionnaire.

Methods: A self reported questionnaire was distributed to nurses in Greek hospitals. The instruments used were Pittsburgh Sleep Questionnaire Index (PSQI), the Athens Insomnia Scale (AIS), and the Karolinska Sleep Diary (KSD). The PSQI is for the quantification of subjectively reported sleep and waking behaviours.

Results: The sample consisted of 265 nurses (233 women and 26 men) with mean age 42.2 ± 7.6 years. The nurses working shifts were 69% with 16.7±8.1 of working experience and mean duration of TST 5.73±1.71 hours. According to PSQI (7.11 ± 3.79), 65.4% of the nurses stated poor quality of sleep and 65.9% stated severe insomnia problems according to AIS (65.9%).

The fact that nurses reported poor quality of sleep during night made them having the sense of slightly decreased sense of well-being (54.9%) and functioning during the next day (51.6%). The percentage of nurses that slept before night shift was only 57.6% of mean duration 2.1 ±1.2 hours. Also, only 44.3% of them had a short nap during day.

Conclusion: There is no doubt that the nurses have severe sleep problems. Finding coping strategies and the improvement of workers’ sleep hygiene, as long as it is difficult to stop doing shifts, is an objective which should not be subordinated to purely economic considerations. The concept of ‘rest’ must be expressed in units of time, i.e. in days, hours. Community workers must be granted minimum daily, weekly and annual periods of rest and adequate breaks, it is declared by the European Union’s working time directive.

The effects on employees’ musculoskeletal pain of physical activity and ergonomics program
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Background and aim: The musculoskeletal pain among the employee in Turkey is considerably high. Occupational Health Nurses can play an important role to solve this problem. The purpose of this study was to investigate the effects of physical activity and ergonomics program on employees’ musculoskeletal pain.

Methods: A quasi-experimental design with pre-testing, post-testing and a control group was employed. Study population included employees of an ice-cream factory between May 2013-July 2013. Fifty seven employees formed the intervention group while 63 students formed the control group. Data were collected with a demographic form, Visual Analog Scale, Nordic Musculoskeletal Survey, International Physical Activity Questionnaire (IPAQ) and Rapid Upper Limb Assessment (RULA). At the statistical analyses, descriptive statistics, Independent Samples T test, Chi-Square, Mann-Whitney U, McNemar and Wilcoxon tests were used.

Results: The percentage of participants who experienced low back, back, neck and shoulder pain in different intensities are 87.5%, 70.8%, 69.2% and 61.7% respectively. When pre-test and post-test pain scores of intervention group were compared, the average post-test scores were
significantly lower in neck, shoulder, wrist and low back regions than the pre-test scores. When the intervention and control groups’ RULA score compared, in the intervention group whereas proportion of employees found in “acceptable posture” level was 0% in pre-test, it was 5.3% in the post-test, and in the same group, proportion of employees in “further investigation and change may be needed” level was 31.6% in the pre-test, this rate increased to 61.4% in the post-test.

Conclusion: As a result, physical activity and ergonomics program that has been carried out by occupational nurse has been found effective in reducing the ergonomic risks associated with upper extremities and rate or intensity of musculoskeletal pain.

Key words: Ergonomics, health promotion, nurse, physical activity, workplace

43 Needle stick injuries within a Belgian Occupational Health Service: the development of a standard operating procedure for occupational health nurses

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Background: In 2010, a European directive implemented the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector. Occupational nurses (ONs) are also exposed to the occupational hazard of sharp injuries, mainly while collecting blood, administering vaccinations, and using needle bins.

Aim: To describe the development of a needle stick injury procedure in 2014 at a Belgian Occupational Health Service (OHS) employing 37 ONs.

Methods: A participatory risk assessment was performed, including taking an inventory of materials of concern; identifying risk factors, existing procedures and preventive measures. Risk assessment data were combined, via mind map and fishbone diagrams. Combined data were used to develop a specific procedure for ONs, detailing how to treat and follow up on needle stick injuries.

Results: The participatory risk assessment revealed five risk categories: (1) equipment (e.g., sharps bins with openings that are too small for the needles used), (2) methods/practices (e.g., materials incorrectly used), (3) presence of equipment (e.g., insufficient stock), (4) human factors (e.g., stress), (5) work environment (e.g., inadequate ergonomics).

The participatory risk assessment led to a four-step needle stick injury procedure: (1) cease work immediately and obtain first aid; (2) identify the patient/worker involved; (3) consult the patient/worker’s medical file: (a) infectious disease described: consult a physician for immediate treatment, (b) no infectious disease described/unknown: ask for the patient/worker’s permission to collect a blood sample to test for HIV and hepatitis. If he/she refuses permission, consult your occupational physician for advice and to get your own blood samples taken; (4) make sure that the physician who did the examination registers the incident <24 hours and that he/she sends a report to your occupational physician.

Conclusion: We highlighted a participatory approach with ON participation that could be used to standardize operating procedures for preventing and dealing with needle stick injuries in the setting of an OHS.

Key word: Needle stick injuries Topic: Accidents
The transition from an individual, ad hoc approach, to collective, nonstop stress prevention

Kim Hoogland, the Netherlands

**Background:** Stress is caused by fear. And fear is a bad counselor. Based on this concept, life coach Kim Hoogland has developed the Stress-Alert-System®. This is an online tool which allows organizations to monitor the stress levels of their employees themselves.

**Aim:** Prevention and timely identification of damage caused by stress (illness, accident and absence) as a result of our feelings of fear, anxieties and stagnation. Connecting organizations, coaches and people in the fight against stress.

**Methods:** Stress-Alert-System® provides a biannual stress research system, of which de Levenswaarderingstest® (Life Value Test) forms the foundation. Participants explain their personal situations regarding 56 topics and rate these with a number. Participants are free to make associations during the test. All questions in the test are open questions. The stress report (which can immediately be downloaded after participation) provides participants with an insight into the quality of their lives and provides tools for improvement. At the same time, a stress filter ensures that individual results are compiled on a team level and proposes employees who are eligible for preventive or curative intervention. Organizations are now able to discuss topics that causes stress within the team and preventively refer their staff to a coach. A joint function between employee and coach make data exchange possible. Because the coach is already in the possession of the stress report, the facts of the situation can be immediately discussed during the interview.

**Results:** Stress-Alert-System® is a start-up. Pilots indicate that approximately 14% of the total number of participants is selected for preventive intervention. This is consistent with research statistics form CBS (Statistics Netherlands).

**Conclusion:** Stress-Alert-System® is attracting keen interest from insurance companies and occupational health services and will make a definitive breakthrough in 2016.

Key Word: Stress prevention

Fatigue in visually impaired employees

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**Background:** An organisation that is working with visual impaired people in their questions around work provides consultation, assessment and job coaching. Many clients came forward with problems in the area of fatigue. From this experience a model was developed that can identify factors that influence fatigue in a workplace. The model identified the following factors in relation to fatigue: As Workstresors the following aspects were identified: Travel & mobility, Working pace, Visual effort, Physical effort, Social implications. As Individual factors: Achievement motivaton, Personality, Copingstijl. Also Energy sources were taken into account: Social support, Thriving, inspiring work, Adjustments / Accessability tools and Daily routines and habits.

A two-day training was developed to address these issues in order to prevent absenteeism or hindrance in the workplace. The training is given twice a year and is highly appreciated by participants.

In 2015 a study started into the measures of fatigue, the effectiveness of this training and the validity of this model. The study was conducted in cooperation with VU University in Amsterdam. The study has 67 participants who are working in medium to high qualified jobs and have a visual impairment. The study is completed in January 2016.
**Aim:** Aim is to compare the measure of fatigue for visually impaired workers with normal workers or workers with Burnout so that measures can be taken. Second goal is to identify whether the suggested aspects influence fatigue and to establish the effectiveness of the training.

**Method:** Questionnaires were given to 67 participants, 31 of which took part in the two-day training, the rest being control group. In October a second questionnaire was given to all participants, so that measures of fatigue could be compared over a period of 4-6 months.

**Results:** The results show significant higher levels of fatigue for workers with visual impairment and interesting insight in contributing factors. It also shows that fatigue is hardly related to personality factors with the exception of a form of achievement motivation. But it is mainly related to practical issues like working pace, and visual fatigue. Social support has a relation with less fatigue. The results can be used in training, consulting and assessment of visually impaired workers.

**Conclusion:** Fatigue amongst workers with a visual impairment is severely stronger than in normal population. This study gives insight in contributing factors so that support for these workers can be optimized and absenteeism can be prevented.

**Keywords:** Psychosocial Risks, Work Life Balance, Health Promotion, Work Organization

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**Assessing the relation among burnout, aggressive behavior and psychiatric symptomatology in nursing staff**

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**Introduction:** Burnout is usually defined as a state of physical, emotional and mental exhaustion. Stress and burnout can not only affect physical and mental health but behavior as well.

**Aim:** To assess burnout and its possible relation with mental health and aggression in nursing personnel.

**Methods:** 160 nurses participated in this cross sectional study. Data were obtained using the Maslach Burnout Inventory (MBI), Buss & Perry Aggression Questionnaire and the Greek version of the Symptoms Rating Scale for Depression and Anxiety (SRSDA). Statistical analysis performed with the Statistical package for Social Sciences, SPSS 21.

**Results:** The reported burnout levels for each factor were for Emotional Exhaustion 19.8±11.0, for Depersonalization 10.1±5.0, for Personal Accomplishment 35.6±8.6. Upon examination, the “Depersonalization” subscale of the MBI appears to be significant positive correlated (p<0.05) with the following AQ and SRSDA subscales: “Physical Aggression”, “Anger”, “Hostility”, “Total Aggression”, “Depression Beck-21”, “Depression Beck-13”, “Melancholia”, “Asthenia”, “Anxiety”. Similarly, significant correlation( p<0.05) exists between the scale of “Emotional Exhaustion” and “Total Aggression”, “Depression Beck-21”, “Depression Beck-13”, “Melancholia”, “Anxiety”. The “Personal Accomplishment” subscale of the MBI scale, exhibits, as expected, quite the opposite behavior. It is negative correlated (p<0.05)with the following subscales of AQ and SRSDA, “Anger”, “Total Aggression”, “Depression Beck-13”, “Melancholia”.

**Conclusions:** Burnout levels in nurses appear to be moderate. Its effect on their mental health and aggression is important as the study showed statistically significant correlations.
between MBI, AQ and SRSDA scales.

**Key Words:** Burnout, Nursing Personnel, Aggressive behavior, Mental Health.


**52** Validating the Psychological Trauma Index Scale in heath shift workers of 6th health District hospital emergency departments, in the Greece of crisis.

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**Background:** The consequences of work related fatigue and psychological injury of shift workers, are significant, affecting: national and personal productivity, occupational health and safety, health care costs, personal well-being. Evolving legislation and work-practice reforms, in Greece of crisis, to protect against them, will inevitably become mandatory. PIRI is the first specific measure based on triangulated self-report of behaviors associated with underlying psychological changes induced by chronic exposure to high level stressor.

**Aim:** Balancing of the Risk of Psychological Trauma Index (PIRI) on Health Workers, working in shifts, in Hospital Emergency Department of the 6th Health District, in Greek language. Investigation of the possibility of chronic fatigue syndrome, of poor recovery between shifts, sleep problems, PTSD symptomatology and maladaptive alcohol use, incurred in the sample and the association of demographic, social, educational and occupational characteristics between different working groups

**Methods:** Descriptive cross-sectional study, validating the PIRI, having written permission by authors. Convenience sample will be used of 116 health workers working in shifts, in 6 general hospitals of the 6th Health District.

**Results:** The reliability coefficients of a Crobach were all above the acceptable limit (> 0.80) for all dimensions of questionnaire PIRI. Confirmatory factor analysis after modification effects gave acceptable limits for indicators GFI (> 0.8), CFI (> 0.9), RMSEA (<0,08). Respondents displaying moderate intense, chronic fatigue and recovery (today and in six months) . They also, exhibit moderate sleep problems and symptoms of posttraumatic disorder. Regarding the working agents, significant differences were found in both the dimensions of the PIRI depending on whether the emotional / physical condition prompted them to obtain a license to whether sleep well and feel when they wake refreshed , whether the work requirements adversely affect the time and energy you spend on themselves, their families and their work, the number of patients allocated, to the satisfaction of their salary, indicating that has discriminative validity and can distinguish the groups with higher levels of disability. Problematic alcohol consumption of PIRI questionnaire showed the least number of correlations due to the fact that workers have very few problems with alcohol.

**Conclusions:** The PIRI questionnaire can be excellent tool of primary prevention for organizations and employees in Greece. Especially for 'first line' workers presenting problems in recognizing and assumption of the problem, being a reliable system of "early warning" for both agencies and individuals arising scores serve as "red flag" for detection of workers tend to develop psychological trauma.
**Key words:** Occupational fatigue, chronic fatigue syndrome, acute fatigue, burn out syndrome, shift, psychological trauma, risk of psychological injury, occupational risks, health professionals, health workers, measurement tools for professional fatigue syndrome, tools for measuring the risk of psychological injury.

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53 Retaining Ageing Nurses: Key to Solving Nursing Shortage. A literature review.

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**Background:** Today, nursing workforce is rapidly ageing, at a time when healthcare demands are increasing. Retirement of aging nurses has contributed to a critical global nursing shortage that is anticipated to increase. Future workforce projections indicate that there could be a shortage of up to 250,000 nurses by 2025. This global nursing shortage is in part due to a consistent pattern of nurses leaving the workforce after the age of 50. Retaining older nurses in the workforce is an important strategy for managing workforce shortages.

**Aim:** To describe the physical and emotional challenges that ageing nurses experience and the strategies that are required to motivate nurses to continue working.

**Methods:** Review of relevant literature in databases PubMed, Cinahl and Google Scholar was conducted between June and August 2015. We included reports that were published in English in or after 2013 and specifically examined the impact of aging workforce in the healthcare industry.

**Results:** Work stressors, including shift work, heavy workload, violence, increased acuity of patient care and perceived lack of responsiveness to nurses concerns, contribute to job dissatisfaction. Chronic diseases as well as age associated health changes are of increasing likelihood in middle age. Moreover, job related morbidities such as musculoskeletal injuries, depression and chronic pain may further cause many older nurses to leave the workplace prematurely. Recommendations for improving retention include flexible work options, workplace design and ergonomics, strategic management for demographic and workplace changes, training and lifelong learning, caregiver and grief recourses, retirement planning and boosting participation in benefits.

**Conclusion:** Global health workforce is in a state of critical and worsening shortage, and it is
a fundamental constraint to reaching health and development goals. It makes a strong case that workforce policy changes should be taken in order to facilitate the working life of ageing nurses and to minimize workforce shortages.

**Keywords:** Ageing nursing workforce, work hazards, nursing shortages, retaining nursing workforce, older nurses.

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54 Occupational Contact Eczema and nursing: a study in an Irish Hospital setting
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**Background:** An estimated 1000 nurses develop Occupational Contact Eczema (OCE) in the UK each year (Health Service Executive, 2010) and it is the most common work-related disease in Ireland (Health and Safety Authority, 2010). Despite this no studies were found in the literature measuring the rates of OCE among Irish nurses. For this reason.

**Aim:** This study’s aim was to determine the rate of OCE among nurses in an Irish hospital. An objective of the study was to determine if demographics and hand-washing are risks of OCE. Another objective of the study was to investigate if the use of emollient hand-cream reduces the risk of OCE. The effects OCE can have on the economy (e.g. increased sick-leave) and on the nurse’s quality of life were also measured.

**Methods:** A cross-sectional survey using a self-report questionnaire was utilised for this study. One hundred surveys were distributed to an Irish hospital and 78 were returned.

**Results:** The prevalence of self-reported OCE was 62.8% of the sample while the self-diagnosed rate was considered accurate as nurses are educated health professionals with a knowledgeable background of OCE. Demographics were not found to contribute significantly to OCE prevalence. In relation to hand-washing, washing hands over 20 times a day was found to be a significant risk factor for developing OCE (p=0.049), however the type of hand-wash used was not a significant risk factor for OCE. The use of emollient hand-cream was shown to significantly (p=0.001) reduce the risk of OCE. The nurses QOL was shown to be significantly affected by the severity of OCE in terms of mood (p=0.019), housework and daily activities (p=0.001), sport activities (p=0.009), close personal relationships (p=0.009) and getting about and travel (p=0.000). A considerable proportion of the sample, 16.7% have taken sick-leave due to OCE.

**Conclusion:** The occurrence of OCE among nurses in this study was considerably high. In comparison to the general public in Ireland, nurses in this group are 4.4 times more likely to develop OCE than the remaining population. Economic effects and effects on the nurse’s QOL were also present. Preventative measures focused on reducing hand-washing frequency and promoting emollient hand-cream use could significantly reduce the occurrence of OCE. For further research a larger sample size would be beneficial to represent the nursing population of Ireland.

**Key Word:** Occupational Contact Eczema, Nurses, Occupational Skin Disease
Systematic review of sleep disorders and related factors among shift workers
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BACKGROUND: Shift work has been associated with adverse health effects by disturbing circadian rhythms. Circadian rhythm disorders lead to inadequate and poor-quality sleep, and sleep disorders such as sleep apnea, insomnia, and shift work disorder.

AIM: This systematic review is aimed to investigate systematically the studies that assessing the sleep disorders caused by the shift-work and to evaluate related factors.

METHOD: The framework of this study is consisted of 1368 articles having been found from the databases of Pubmed, Ovid, Cochrane, CINAHL and ULAKBİM. The articles found as full text and published in English and Turkish in 2002-2015 by searching the key words of “sleep”, “sleep quality”, “sleep disorder”, “workplace”, “shift work”, and “worker” were chosen for the study.

RESULTS: According to the inclusion criteria, a total of 12 articles were included into the study. Despite experiencing sleep disorders in many professions, these problems are more common among nurses and night shift drivers. The frequency of sleep disorders (such as sleep apnoea, insomnia) in all studies was found 70.9%-87.18. Most of the workers are observed to increase the consumption of tea and coffee to stay awake while working the night shift. It was stated in the studied scrutinized that the factors such as age, long working hours, gender, marital status, night-shift work, working in service or healthcare sector may affect sleep quality.

CONCLUSION: This systematic review has provided the opportunity to evaluate the sleep quality in different professions. Applicable intervention strategies are needed for prevention of decreased sleep quality for shift workers.


Workplace Cervical and Breast Cancer Screening Program in a Pharmacy Company
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Background: Cervical and breast cancers are the commonest cancers among women, and breast cancer is rarely seen among men. The workplace has been deemed a suitable and important location for educating and screening about cancer for workers. It is more critical to focus on early determination of these cancers in worker population. Therefore, cancer screening programs should be planned and conducted for workers.

Aim: To introduce of cervical and breast cancer screening programs’ planning, implementation and evaluation stages among workers in a pharmacy company.

Methods: The screening program was applied to 80 workers who are working in a pharmacy company, and it was carried out in three stages as planning, implementation and evaluation. The interventions in all stages were planned with employee, managers,
occupational physicians and occupational health nurses (OHN) which based on Health Promotion Model.

**Results:** Results of the study were included 39 female and 41 male workers. The interventions at the planning stage were identified as financial budget calculation; adjustment of posters, brochures and other materials; appointment scheduling for workers, determination of educators and meeting times, and arrangement of local health care centers (LHCCs) that to be held screening tests. In implementation stages; firstly Occupational health team provided education to 80 workers (participations rate for female 61.25% and 78.04% for male) to increase awareness. Secondly, it was arranged mammograms (68.18%), and Pap tests (55.17%) for female workers at LHCCs. During the evaluation process, two workers breast and one workers with risk for cervical cancer were referred for treatment and were followed. The program was lasted in three months.

**Conclusion:** Cancer screening programs can be easily applied in the workplaces and reduce the mortality rate of breast and cervical cancers.


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**60 Management of the noise risk at the workplace**

*Christine Dekoster, occupational health nurse, ergonomic coordinator, Health promotion, EHS Belgium, GSK*

**Background:** GSK, managers and prevention advisors are helpless to assess noise exposure at the workplace. Observation is that noise “exposure” is often limited to a mapping of the noises and/or an Excel document with isolated noise level measurements, every one made their own template. There are no clear guidelines on measurement methods, like noise level meter and dosimeter. What to use in which case? , there is an outsourcing of noise’s risk analysis, resulting in an increase of costs for the departments, even when there is no need.

**Aim:** In 2015 objective for the Environmental Health and Safety department was to review all its procedures and make them compliant to inter alia the quality procedures. In particular, I was in charge of reviewing the existing procedure related to “Worker’s noise exposure at his workplace.”

**Methods:** Employer and external service for prevention and protection of workers health had no compliant measurements of noise level in order to: identify the risk profile of workers and the health surveillance that is required according to law, define collective and individual ear protection equipment and organize work considering the noise level.

**Results:** The choice fell on the “method of INRS exposure points” a simple method of assessment to noise exposure level over a period of 8 hours and the procedure “Worker’s noise exposure at his workplace” was update and simplify in 3 steps:

- The first one, evaluate the strength of voice and noises of shocks and divides the working day into separated workplaces,
- The second one, measure the noise level L_A_eq and the exposure time at each workstation,
- The third applies the method of exposure points and calculates the noise level exposure over a period of 8 hours.

Besides the choice of the method, the process was also to provide all stakeholders common tools (creating a didactic working form and buying new noise level meters), and train to the new procedure (One page training, E-learning, live presentation).

**Conclusion:** Worker’s noise exposure at his workplace is always difficult. In a big company change requires time especially if at the beginning, there is some resistance to change. My goal
is to focus on change acceptance and to increase confidence in the method. I have to continue to support people in that way until the change is initiated. Staying focus on that, being helpful and in case of complex situation reoriented managers and prevention advisors to an expert ergonomist.

**64 Webinars enhance dissemination of prevention at work knowledge and programs**  
*Rudi Daniels, Occupational health nurse – Responsible customer training, IDEWE, Belgium*

**Background**  
Occupational safety and health (OSH) knowledge and resources are less developed in small and medium sized enterprises (SME) due to financial, capacity and organizational constraints. SME's express the need for quick, professional and practical OSH advice. Webinars might be a time efficient way to communicate with SME's and to improve their prevention programs.  

**Aim:** To assess the usability of webinars in facilitating the communication and implementation of OSH advice.  

**Methods:** Ten webinars were organized on different OSH topics (such as accident prevention, health promotion, psychosocial risks, ...). The webinars were evaluated through post-event surveys to measure the quality of the presentation, to get feedback on the perceived added value and to assess the effectiveness of the approach. Responses were collected and data were analyzed quantitatively and qualitatively by a multidisciplinary expert panel.  

**Results:** The major reasons for attendance were: webinars are a low-barrier online communication platform; participants save travel time and cost; participants like the case presentations and the opportunity to interact immediately with the experts. Barriers to attendance were initial technical problems such as connectivity and audio quality. The majority of participants (80%) rated the information provided as useful. In addition, they perceived an improved ability to bring the OSH knowledge into practice. The question-and-answer functionality and immediate feedback gave attendees the opportunity to participate actively. Attendees were able to reflect on the topic and prepare the actions to be taken in their own work environment. The expert panel wrote recommendations on utilizing webinar technology based on the feedback and training needs of SME's.  

**Conclusion:** The qualitative analysis showed that webinars are a complementary and cost-effective tool to support and meet the prevention goals of Belgian SME's. There are indications of a positive return on investment of webinars. With limited resources, we have been able to create a substantial and growing webinar community. This report is the first to describe that interactive webinars are a promising tool to improve the transfer of OSH knowledge in Belgian SME's.  

**Themes:** Communication skills – New technology  
**Keywords:** Webinar – Online training – Prevention – Well-being at work

**68 The effectiveness of the Participatory Approach at the Workplace on health, sickness absence and return-to-work - A review of the scientific literature**  
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Background and aim: In the Netherlands, we developed a multidisciplinary guideline for the Participatory Approach (PA) at the Workplace, in collaboration with insurance physicians, labour expert, occupational health physicians, occupational health nurses, occupational hygienists, and occupational therapists. The PA is a systematic approach with pre-defined steps to find consensus between worker and relevant stakeholders, such as the employer, on the main problems and solutions for the worker’s health problems and work participation under the guidance of a professional, as stated above. This results in an action plan in which is defined what is done, by whom and when. For the development of the guideline we systematically searched the scientific literature to investigate the effectiveness of the Participatory Approach at the Workplace on mental and physical health problems, sickness absence and return-to-work.

Methods: We searched PsychINFO, Medline, CINAHL, Cochrane and Embase for English, peer-reviewed articles that were published before February 24th 2015.

Results: In total 1934 titles and abstracts were screened of which 18 articles were included in the review, reporting data of 13 different studies. None of five RCTs investigating the effect of the PA on musculoskeletal pain found an effect and one of two studies investigating the effect on mental symptoms found a positive effect. All three studies investigating the effect of PA on sick leave due to musculoskeletal pain found a positive effect. Five out of 6 studies found a positive effect of the PA on the time to return to work in workers with musculoskeletal pain. No effect was found on the return-to-work of workers with mental or depressive symptoms or after cancer treatment.

Conclusions: Whereas the effectiveness of the PA was not convincing for reducing musculoskeletal or mental problems, the PA appeared effective to reduce sick leave and fasten return-to-work, especially in workers with musculoskeletal pain.

Key Word: Participatory Approach (PA), Workplace, worker
Results: Expected results and conclusions. The evaluation of the level of knowledge, perceptions and beliefs of nursing students, will be used to improve the content of the course so they will be able to work safely as nurses, as well as potential occupational health nurses.

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74 Feasibility study using a method of analysis and risk assessment appropriate to the agricultural sector

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Background: IDEWE collaborate with the employers in their approaches aiming at reducing the accident risks of work development of occupational diseases. The implementation and the perpetuation of the prevention policy within a farm require specific knowledge and competences.

Aim: The aim of this work is to evaluate feasibility to use a specific method of analysis and of evaluation of the risks adapted to the labour sector.

Methods: The tool used, Safety Pack, was developed in collaboration between the Belgian Federal Public Service Employment, Labour and Social Dialogue and by the Walloon Mission of the green sectors. Its objective is to enable the operator to achieve by itself the security audit of a firm based on the principal risks to the sector. The tool addresses the main risks reported by the international literature. Based on the risk analysis, the tool helps decide preventive measures put in place by a method of prioritization taking into account the determination of the risk and the level of acceptability of it. The method was tested on a dairy farm of family type. It includes a 350 breeding cows which 155 dairy cows.

Results: The method allows to identify simply and relevant risks on the holding. The main risks relate found the fire, falls, tractor use, contact with cattle and ergonomics. The measures proposed following the method can reduce the risk of quickly and inexpensively. The approach allows the operator to have in hand the information necessary for the preparation and implementation of its prevention plans.

Conclusion: This study highlights the importance of taking into account the specific needs for agriculture. This work will provide the basis to develop the services offered to this sector. A computer version of the tool must be developed to allow real-time encoding by the prevention advisor.

Key Word: Risk analysis – Dairy farm – Prevention policy
**Background:** In recent years, the international literature has dealt with the study and recording of the cost of hospital infections. The increase in hospital infections leads to increased hospital admissions of patients with severe pathology, with chronic diseases. Poor management of hospital infections leads to increased hospitalization costs.

**Aim:** To make it possible to reduce the incidence of hospital infections should its control to be the strategic goal of health services providers and health professionals. Infection control in a hospital only reflects the quality of the provided health services on the other hand helps reduce hospitalization time, and ultimately reduce costs. Creating IT system will have as aim to control infections which will be based on continuous recording of hospital infections and antibiotics prescribed. That is a useful tool for all health professionals working in hospitals for better management of hospital infections, and continuous update of stakeholders.

**Methods:** The sample includes patients with onset of infection that occurs after 48-72 hours of her admission to the hospital and was not present even in incubation stage. Data collection will be done by the hospital’s infection control committee, the hospital pharmacy for antibiotics as well as the microbiological laboratory. Evaluation and data entry will be implemented on specially designed LIMOXIS system.

**Results:** Poor management of hospital infections by the operators of hospitals and non-awareness of employees led to the development of resistant microorganisms leading to years of treatment and increased hospitalization days and ultimately increase the cost of hospitalization. With the help of LIMOXIS information system should directly be the following benefits: recording infections in areas of the hospital, investigation of infection agents, recording antibiotics, recording length of stay of patients, ensuring quality health services, informing health personnel, training healthcare professionals, reducing hospitalization, reducing hospital costs.

**References:**

**Job Satisfaction and Organizational Commitment of Hospital Nursing Staff in Greek Hospitals**
Athanasia Konstantinopoulou², Dimitrios Tsoromokos², Nikolaos Tsaloukidis², Athina Lazakidou², Panagiotis Prezerakos²
² University of Peloponnese, School of Economy, Management and Informatics
Department of Economics, Tripolis, Greece
² University of Peloponnese, Faculty of Human Movement and Quality of Life Sciences, Department of Nursing, Sparta, Greece
**Background:** Job satisfaction and organizational commitment to the hospital are key components of the solution to the problem of lack of resources faced by health systems worldwide.

**Aim:** The aim of this study is to investigate concepts of organizational commitment and job satisfaction, and their utility in the operation of the public sector and in particular the public health sector.

**Methods:** The method chosen for the study was the use of structured self-complementary questionnaire. It was performed a cross-sectional study. The sample consisted of nurses and nursing assistants of the hospitals. 400 questionnaires were distributed and 360 completed (response rate 90%). For job satisfaction was used a Likert scale questionnaire of thirty questions which are categorized into six sub-sections: 1) labor resources, 2) support from superiors, 3) workload, 4) quality of care, 5) burnout and 6) job satisfaction. For the organizational commitment was used the O.C. Questionnaire. The questionnaire consisted of fourteen (14) statements and was the most common measurement tool used today to measure dimensional organizational commitment.

**Results:** Among the answers of the participants regarding the items of the questionnaire relating to the commitment to the organization there were also demographic questions. After the sum of the responses the total rating in the commitment to the organization was revealed. Men performed better commitment to the organization compared with women. Likewise educational level is associated with increased dedication to the profession.

**Conclusion:** Despite the difficult working conditions and low job satisfaction recorded on wage levels, nurses exhibit a high sense of duty. This shows their affection for their profession and their willingness to offer regardless of the difficulties. The conclusions drawn from the conduct of this study will be a useful tool in terms of hospital administration for improving the provision of health services to patients and improve the working conditions of nurses.

**References:** Ho, W.H., Chang, C.S., Shih, Y-L., & and Liang, R.D. (2009), Effects of job rotation and role stress among nurses on job satisfaction and organizational commitment. BMC Health Services Research, 9(8), 1-10.

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**Effective, efficient and adequate communication**

*Kim Rooijackers MSc, psychologist and Erik Schuurman BSc, cognitive behavioural trainer, Winnock, the Netherlands*

**Introduction:** Communication between people, can sometimes lead to misunderstanding each other. Especially when people try to convince each other and when there is a lot of arguing and discussion, you have probably end up into the Drama Triangle. The Drama Triangle will lead to frustrations for all participants and causes a lot of problems and misunderstanding in communication.

In communication we differentiate verbal and non-verbal components. People are responding for 85% to non-verbal components (physical non-lingual signs of the other) and for 15% to verbal components. A smile or an angry face, posture and attitude, the sound of our voice, in communication, it all matters!

**The Model of Rosch**

This model has been developed to understand and to overcome difficulties and pitfalls in changing from non-constructive communication (the Drama Triangle) to constructive communication (described in the Empowerment Triangle). Both triangles are described by transactional analysis.

As part of the Model of Rosch, the auteurs describe the dynamic that is needed to develop an
adequate relation build on trust and the intention to cooperate in the Present (Here and Now). In the Meeting Triangle issues according to under laying motives for getting into the Drama Triangle, can be discussed without getting into disagreement and frustration. In the Present we can accept the past and put our frustrations in perspective of our under laying needs that has been ignored by ourselves and the others. The only purpose of this Meeting Triangle is to develop a constructive working relation by listening to the experiences and beliefs of the patient without moral judgement. That requires an attitude to keep an open mind an avoid moral judgement and to communicate with each other on a level of equality, appreciation and respect for the behaviour of the patient.

82 Digital Pen and Paper (DPP) in Nursing Handover for Better Work Organization of Nursing Staff

Dimitrios Tsroromokos, Nikolaos Tsaloukidis, Filippos Gozadinos, Athanasia Konstantinopoulou, Zacharias Dermatis, Athina Lazakidou
University of Peloponese, School of Economy, Management and Informatics, Department of Economics, Tripolis, Greece

Background: The digital pen and paper technology is a new acquisition device which mimics natural handwritten data acquisition. In addition to providing computerized acquisition of information, the DPP allows also to record the temporal relationships on how the information has been acquired [1].

Aim: The aim of the present abstract is to present a useful tool for Nursing Handover in the NHS of Greece. The utilization of Information Technologies and Communications in conjunction with the development of innovative skills in the wider area of Health can contribute significantly to improving the provision of health services, but also to upgrade their quality.

Methods: With the Digital Pen & Paper - DPP users receive an accurate depiction of handwriting while having the ability to convert this text into text format that is editable from any PC. The last step of processing is the integration of data from documents on an installed system of the Hospital. The digital pen sends data that has stored in the memory of either wireless or through usb. The unique grid of dots that has each page, the encrypting and recording the identity of the digital pen, guarantee safety and traceability.

Results: Via the standard form and the digital pen for the Nursing Handover the quick and correct completion of a document and improved data quality and efficiency has been achieved. After completion of the form, data can be routed by e-mail to multiple recipients within or outside of the hospital (Administrator, Head of Department, etc.). All handwriting documents are stored for a possible future export or processing.

Conclusion: The Digital Pen & Paper can be used in all departments of the hospital. The signature captured by the digital pen, can be a proof of nursing handover or physical presence of health professionals in an Organization. Additionally, the data recorded can be analyzed and give useful hints to improve the Nursing Handover.

The effects of an ICF-training on the consultation skills of occupational health professionals.

M.J. van Boven, MSc, RN, CEN, COHN-S, A.M.M. Valks, Senior Occupational Physician*, Ir. C.P.M de Brouwer**, A. de Jong, MScN***

*Shell International, Shell Health Pernis/Moerdijk, the Netherlands
**Department of Epidemiology, Maastricht University, the Netherlands
***University of Applied Sciences, Department of Nursing Studies, MANP

Background: Long-term sick absence is a recognized socio-economic-medical problem with significant consequences for organizations and individuals. Once a period of absence has started, treatment is not always effective and doesn’t always result in a return to the workplace. Previous research has shown that a preventative strategy (ps), where employees with a higher risk of absence due to sickness are identified and offered timely support, is effective in preventing future absence. Nevertheless there is still much room for improving the effectiveness of the ps. An appropriate conceptual framework for supporting the preventive strategy is the bio-psychosocial model. The WHO translated this conceptual model into a classification system "the International Classification of Functioning Disability and Health (ICF)". The use of the ICF may be useful to equip the occupational health professionals better for practicing the preventive strategy, through optimizing the quality of the consultation management and referral behaviour. Training in the ICF model can deliver the necessary knowledge and skills.

Aim: The aim of this study is to evaluate the effectiveness of a short ICF-training on the quality of the consultation management and referral behaviour of OH-professionals.

Methods: A questionnaire was developed for the consultations to investigate the measurable effects from the ICF-training. Data about “at risk” employees collected from a total of 42 clients who were randomly assigned to OH professionals (N=6). The results were analyzed statistically using the Chi-square test. The training was evaluated through interviews.

Results: After the ICF-training there is a slight increase that’s the OH-professionals says to recognize a problem involving employees with a higher risk. The ICF impacts the level of the professional on the self-efficacy. And there is a noticeable increase in the extent to which the professionals consider the consultations as an intervention.

Conclusions: The ICF is effective and its application can provide an important contribution in self-efficacy and promoting self-management and also improve the quality of the consultation.

Keywords: International Classification of Functioning, Disability and Health, Preventative strategy, Long-term sick absence, Consultation skills, ICF-Training.

85  **NORDSAM-The Promotion of Occupational Health Nurses within. The Nordic Countries:**

Submitted by The Danish Society of Occupational Health Nurses (FaSA) on behalf of: Göte Mölleby (Sweden), Miia Nyman-Hiltunen (Finland) and Lotte Falck (Denmark).

**Background:** Founded in 1976, NORDSAM is a Nordic collaboration of Occupational Health Nurses from Denmark, Norway, Sweden, Finland, Iceland and the Faroe Islands. The committee meet on an annual/biannual basis, and each member country has one representative and a substitute selected by the National Association/Group. If a country has more than one Association/group a representative and a substitute is selected from each National Association/Group. The committee of NORDSAM select a Chairman and a Secretary for a 3 year period. Voting is undertaken with one vote per country.

**Aims:** To create a safe and healthy working environment. To promote good health prevent occupational illness, To develop cooperation between the Nordic Occupational Health Nurses Associations and exchange knowledge and working experience through personal contact To disseminate knowledge within the Occupational Health Nursing communities in the Nordic countries, To disseminate knowledge from the Nordic countries at International level

**Objectives:** Exchange of knowledge through seminars and training courses between the respective countries. Provision of opportunities for the members of the National Nordic Associations to participate in mutual activities. Exchange of written information materials. Organisation of Nordic Conferences for Occupational Health Nurses

86  **The emotional support at work: conceptualization and influence on burnout and organizational commitment**

**ABDELHAMID DJEDIAT** PhD student in psychology of work and organizations.  
occupational psychology research center and consumption, ULB, Brussels, Belgium.  
laboratory of Psychology, health and Quality of life, University of Bordeaux, France.

**Background:** The increasing demands of work and their impact on the employees’ quality of life are timely. In this perspective, the reflection on the managerial practices deserves to be thorough. In this perspective, nurses are particularly faced with emotional and significant emotional dissonance which may cause dissatisfaction eventually burnout.

**Aims:** The objective of this research is to conceptualize, measure and predict the influence of emotional support at work (ESW) by studying the impact of psychological tensions (conflict work / family life and family life / work), labour characteristics (physical constraints, complexity of work) and emotional strain on burnout, organizational commitment, job satisfaction, and organizational citizenship behaviours. The moderating effect of emotional support at work as well as emotional regulation strategies will be analyzed.

**Methods:** The hospital raises an exemplary manner the dynamics and challenges of local management. We will consider three cases: the University Hospital of Bab El Oued (Algeria), the University Hospital of Brugmann, (Belgium) and the University Hospital of Bordeaux (France), this will highlight the impact of organizational culture on (ESW) influence. For that, we mobilize two methods: qualitative and quantitative (more about a double measure of perceived ESW from the health managers and members of the healthcare team and a measure of emotional regulation strategies).

**Results:** Strong organizational practices issues seem important in helping caregivers to develop their relational consciousness and support them in this development knowing that the quality of interpersonal relations is a variable on which the organization has some control and
can be used as levers mitigating the negative effect of psychological stress and burnout thus promoting organizational commitment and organizational citizenship behaviour.

**Conclusion:** This research contributes to the understanding of the influence of emotional support at work and demonstrates the leverage effect of (ESW) on Burnout.

**Key words:** Emotional support at work-Burnout-Organizational commitment-Organizational citizenship behaviour-Emotional regulation.


**88 Society of Occupational Health Nurses in Croatia**

*Irena Danyi Holetic, Stanka Helena Greguric*


**Background:** Occupational Health nurses (OHNs) in Croatia have a long, specific and significant tradition since 1950’s was established special education by prof. Andrija Stampar for OHNs. Over 200 OHNs work in the 151 occupational health practice with a secondary school education without additional training in occupational health. Society of OHNs was established 2011 and oficially a member of FOHNEU since 2013. (since 2010. observer State).

**Aim:** To promote the level of education, training, standards of professional qualifications and research in the field of OH of OHNs, strengthen the role of OHNs and to upgrade the health of working population in Croatia.

**Methods/ Results:** Collection of data has been from archival records on the history of medicine in Croatia, as well as from available archives and health institution’s annual reports. The first written traces (1776) in Croatia describe the serfs’ living and working conditions and their diseases. This appeared in Varazdin in the first medical book in Croatian. Zeljko Hahn, who between 1912 and 1953 developed an industrial accident and tuberculosis prevention plan concerning workers, is considered the founder of Croatia’s modern occupational medicine. Andria Stampar, one of the founders of the World Health Organization, devoted in 1925 one chapter of his book “Social medicine” to work pathology. In 1939, Branko Kесic published a book titled “Work hygiene and industrial diseases in miners and workers of the Institute for Work Hygiene (presently called Institute of Medical Research and Occupational Health). Since 1950’s as established special education by prof. Andrija Stampar for OH nurses. Education included higher education of defined and distinctive occupational nurses in the occupational health offices. This was the standard up until the end of the 1980’s when the demand for education of nurses in occupational health abolished.

The Society of OHNs has started negotiations for establishing an OHN Specialist fully trained Registered Nurse with additional education and training of formal study in occupational health. Leading to a recognized specialist qualification in occupational health nursing and university degree level. Through the work of companies and professional training strive to raise the level of education and strengthening the role of nurses in occupational health in Croatia. Also, by
organizing and participating in international conferences and congresses, expand our cooperation with countries in the region, and especially members of the EU.

**Conclusion:** Examples of good practice are transmitted to our work in order to achieve the greatest possible benefit to the working population of Croatia.

**Key Words:** nurse, occupational health, education, Croatia

89  **Life Balance – Education and skills to handle work-related overload as a strategy to prevent sick leave**

Hatting, Jette Wied, RN, MA (psychology), Borgbjerg, Rikke, RN, OHN (diploma). The Danish Nurses Organisation,(Central Jutland Region)

**Background:** The central Jutland region of The Danish Nurses Organisation, had for a longer period of time registered a need and a wish from the members for help in relation to occupational health issues. As a consequence in 2011 the Board decided to upgrade occupational health and created positions for 2 consultants, both Registered Nurses, one qualified in Occupational Health and one holding a degree in psychology. In their daily work, the 2 occupational health consultants observed an increasing demand for information and skills to handle work-related stress, as a strategy to prevent sick leave. This led to the creation of the training course Life Balance.

**Aim:** To provide the members with the possibility to gather knowledge and insight into work related stress, and to equip them with skills to handle work-related overload to prevent sick leave.

**Methods:** Each training course has 4 meetings. 3 meetings for education and 1 meeting for reflection and creating a self-help group. The length of the meetings has been 2½ hours. There have been 8 courses in 2015, with up to 15 participants attending each course.

The education is based on evidence-based knowledge of neurophysiology and resilience.

**Results:** 8 training courses have been completed, almost all with full participation. The substantial feedback has only been positive. The participants has expressed that the course has given new useful knowledge.

**Conclusion:** Based on the high number of participants and the positive feedback, we venture to conclude, that the necessity for education has been evident, and provision of knowledge and skills to handle work-related stress has been useful for the participants.

90  **The International classification of functioning, disability and health anchored in the work-related care Innovation plan for a new Report form**


**Background and problem:** Within the occupational healthcare, the report sent to customer and client after consultation is not always unambiguous and clear. The use of both a certain format and a methodology is required to guarantee the continuity of the re-integration process.

The International Classification of Functioning, Disability and Health (ICF) offers a structure that enables customer and client to take responsibility within the reintegration process by mapping out certain factors.

**Objective:** Develop the report in order to improve both the unambiguity in reporting as well as the continuity of the reintegration process.

**Methods:** As methodology the ‘Mixed-method’ has been applied on the various sub questions leading to answering of the main questions. Literature research was done into the use of ICF in the occupational healthcare. Next was a benchmarking exercise as to how reporting is
performed within the occupational healthcare services in The Netherlands. Finally, verification of the observed results for correctness took place by telephone consultation with key players. **Results:** Result of the ‘Mixed-method’ methodology showed that no literature has been found evidencing the application of the ICF methodology in reporting within the occupational healthcare. Benchmarking and key players confirm this result. **Design:** Based on the literature found a set-up has been for the innovation applying ICF in reports. Hereby the workload model of Van Dijk (1990) has been incorporated. **Implementation:** Implementation of the innovation will follow the roadmap of Grol (2011). An analysis of questionnaires about the innovation amongst occupational health professionals did not lead to significant impediments for implementation. Further elaboration of the implementation plan is required as a next step. **Conclusions:** Reporting can be done based on the ICF methodology. As framework the workload model of Van Dijk shall be used. To embed the ICF within the way of working in the occupational healthcare it is important to develop an implementation plan following existing models such as Grol. Further monitoring of the progress of implementing ICF is of importance for the occupational healthcare. At this moment no scientific evidence is available around the use of ICF in reporting within the occupational healthcare.
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SPECIAL GRANT

OTHER CONTRIBUTORS

This congress is under patronage of the European Parliament
pre congress tour

The Dutch are well-known as the fighters against water and creators of new land out of sea. Dutch construction companies are asked all over the world to build and create new land. Dutch companies also created the Palm islands of Dubai. In Rotterdam we created a new port area named Maasvlakte 2 which is the most modern Harbour of Europe. The Pre congress tour visits Future Land, the information center about the construction and development of Maasvlakte 2. On Future Land we shall have an introduction of the Port of Rotterdam Authority and a presentation of the Building combination. Many Health, Safety and Environmental inspections have taken place during the construction fase. The people who executed these inspections will be the speakers on this tour. The second part of the tour consists of a sightseeing tour around Future Land by boat. The tour shall be very impressive! You are invited to join us.

Date: Wednesday March 16, 2016
Location: Future Land – Port of Rotterdam
Price: Free of charge. Registration in advance is required.

Note: Attendance for delegates who attend the whole congress or one day registration for March 16. There is a limited number of seats available for this tour.

Pre congress tour program

13.00 Departure of the buses at the congress venue
14.00 – 14.15 Introduction by speaker of the Port of Rotterdam Authority
14.15 – 15.15 Presentation by the Safety officer of the building combination Puma: building problems and Health Safety and Environmental inspections
15.15 – 16.15 Sightseeing Future Land: the new harbour and the new created land (boat tour)
16.30 – 17.30 Departure busses to the congress venue in Rotterdam.
17.30 Estimated time of arrival at congress venue, collection of badges and opportunity to visit the posters and exhibition
18.30 Welcome reception – City hall
Congress host Mark

Mark was born in London and has lived and worked in the Netherlands since 1974. He became a professional mime actor and soon found work in leading Dutch theatre companies. Mark has always had great pleasure hearing people laugh and his specialty soon became comedy. As a comedy actor he has performed in a variety of different shows including children’s and street theatre. He has worked in small as well as large productions, performed at a number of international theatre festivals and is equally at home in the big open air venues as in the more intimate theatrical spaces. He has twice been nominated for the Dutch Mime Award. He gives comedy-mime lessons and workshops and has directed a number of shows in and outside Holland. He often works for various companies making tailor-made acts, humoristic speeches, hosting international meetings and performing in company videos.

Congress hostesses Verrassend Jo & Co

Marcelle and Jolanda are both singers, dancers and actrices and they are strong improvisers and they work very much from their warm hearts. This golden duo is wonderfully skilled and takes excellent care of your guests in a truly exceptional way. They break the ice naturally, answer almost all questions, provide shoulder and neck massages, lead your guests the way, and if you wish.... they even sing your guests a song live at their table while having lunch! They just love to make people shine!

Congress secretariat

FOHNEU congress secretariat
Erasmus MC – het Congresbureau
Susan Dijkstra and Renée Schrijver
E: s.dijkstra@erasusmc.nl
W: www.hetcongresbureau.nl
general information

Congress venue
The congress venue is located nearby Rotterdam Central Railway Station in the city center of Rotterdam, surrounded by many hotels, shops and restaurants.

De Doelen Congress centre
Jurriaanse Complex
Kruisplein 30
3012 CC Rotterdam
The Netherlands
Tel: +31 (0) 10 217 17 00

Smoking policy
De Doelen Congress centre is a non-smoking facility.

Services for FOHNEU 2016 delegates
Registered delegates (for the whole congress period) are entitled to the following services and material:
- Admission to all meeting sessions and to the welcome and closing ceremonies
- Congress book, badge, certificate of attendance and a delegate pack with information about Rotterdam
- Coffee/tea/water/lunch
- Pre-congress tour (Wednesday afternoon March 16)*
- Welcome reception at City Hall (Wednesday March 16)*
- Cruise and Dance dinner party (Thursday March 17)*
- Information and Registration desk
  *Registration in advance in required.

Information and Registration desk
The desk is located in the Jurriaanse Foyer (first floor).
Opening hours:
Wednesday March 16: 16.00 – 18.00
Tuesday March 17: 8.00 – 17.30
Friday March 18: 8.30 – 18.00

Congress staff
If you have any questions please direct to the congress staff: Susan Dijkstra and Renée Schrijver from Erasmus MC-het Congresbureau. To be contacted at the Information and Registration desk.
Congress badge and Entrance policy
All people with a congress badge may enter the building and visit the scientific programme, attend the lunches and breaks. You have to wear your badge (visible at all times) during the whole congress period. People without a badge will be requested to visit the registration desk.

Badges and sponsor regulations
Due to EU sponsor regulations we have to follow specific rules concerning the commercial exhibition. Exhibitors have a black badge, congress delegates have a blue badge.

Badges colors

Congress participants March 16 - 18............................................. Blue badge
Congress participants March 17.................................................... Orange badge
Congress participants March 18.................................................... Red badge
Exhibitors ..................................................................................... Black badge
Congress organization ................................................................. Green badge

Internet facilities (Wifi)
In the Jurriaanse complex foyers wireless internet is provided. To access internet:
- start your internet browser.
- Network: deDoelen
- Password: 30123012

Please note that the wireless internet is available to check your e-mail messages etc. The system is not adjusted to heavy downloads.

Lunches
On Thursday and Friday the lunch will be located in the Jurriaanse Foyer and will be served from buffets.

Dinning in the city with a discount
In your congress bag you’ll find touristic information about the city of Rotterdam including the guide Dinning in Rotterdam. Various restaurants offer congress menu’s for a reduced price consisting off a three-course dinner and one beverage (wine, water, beer or a soft drink). Please ask for the menu when you arrive, and show your congress badge and the Dinning in Rotterdam-guide.
Session rooms parallel sessions March 18
On March 18 in the afternoon various parallel sessions are offered. The rooms are located in the plenary session room (Jurriaanse Room) and the adjacent Marriott/Manhattan Hotel (2 rooms).

The rooms in the Marriott/Manhattan hotel can be reached through the stairs (see M on the floor plan) located in the Jurriaanse foyer, next to booth 8 and 9. See floor plan on page 98.

Posters
Posters will be available for viewing throughout the congress in the Jurriaanse Foyer. See floor plan on page 98.

Commercial Exhibition
The commercial exhibition is situated in the Jurriaanse foyer. The exhibition will be open from Wednesday through Friday (March 16 – 18). Please visit the Exhibitors during the coffee breaks and lunches. Find the exhibition floor plan on page 98.

Rotterdam App
The Rotterdam App is a free mobile application that highlights the very best that Rotterdam has to offer, from attractions and museums to hotels, restaurants, clubs and shops. This mobile city guide features 500+ locations, an offline city map, walking tours and a dynamic events calendar that lets you discover what to see & do. To download the Rotterdam App, go to m.rotterdam.info/download on your mobile phone or download it via the App Store or Google Play.
More information on website: https://en.rotterdam.info/visitors-info/rotterdam-app/

Public transport
For overcoming longer distances within Rotterdam, you can travel by underground (metro), tram or bus. Rotterdam has several metro-lines. The metro is the fastest way to cross town. The congress venue is within walking distance from most hotels and from central station (train).

Tickets:
If you travel by bus, underground (metro) and tram you must buy a chipcard, available at the vending machines at the railway or metro stations. You can pay by bankcard, creditcard or cash.
There are three options in chipcards:
1. disposable one trip card
2. disposable (multi)day card
3. anonymous chipcard with credit which can be uploaded.

A credit chipcard can be uploaded in the vending machines located at each metro station and per trip an amount is automatically deducted from card after entering and departing the sensor gates at the stations.

With all chipcards you must check-in and check-out with your chipcard at the sensor gates at the stations.

Useful websites:
Trains (e.g. to go to the airport): www.ns.nl
Metro, bus or tram: www.ret.nl

A credit chipcard can be uploaded in the vending machines located at each metro station and per
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social events

Welcome Reception
Date: Wednesday March 16
Time: 18.30 – 19.30
Location: Rotterdam City Hall
Coolsingel 40, 3011 CD Rotterdam
Price: Included in registration fee.

Note: To enter the welcome reception, you will be needing your congress badge. This badge can be collected at the registration desk at the congress venue (Opening hours registration desk: March 16, 16.00 – 18.00 hrs). Entrance for delegates who attend the whole congress or one day registration for March 16.

Cruise and dance dinner party
This Cruise and Dance party aboard the largest paddle steamer of Europe “De Majesteit”, will be sponsored by the Dutch board V&VN occupational health nurses, regarding their 70th anniversary.

Date: Thursday March 17
Time: 19.30 – 23.00
Location: de Majesteit, Leuvehoofd (Boompjes, Rotterdam)
Price: Free of charge.
Entrance: Together with your badge at the registration desk you receive your ticket for the cruise and dance dinner party. Take this ticket with you to the party.

Note: The Cruise and Dance dinner party is free of charge for delegates who attend the whole congress. One day registrants and guests pay EUR 90 per person. Registration in advance is required.

Registration in advance is required.
Ship sails at 20.00 sharp. Don’t miss the boat.

Website: www.raderstoomboot.nl
**Directions:** On the back of your ticket directions are printed.

**Address:** Leuvehofd (de Boompjes, nearby the Erasmusbridge) Rotterdam

**Metro/subway:** Station Leuvehaven nr. D, E

**Tram:** Stop Leuvehaven nr. 8, 20, 23 or 25

**Parking:** Parking Erasmus Bridge (open 24 hrs) Willemsplein 1 – 3016 DN Rotterdam

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<td>Registration, Poster Viewing &amp; Exhibition</td>
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**NEW OCCUPATIONAL HEALTH HORIZONS**

- **Closing Ceremony:**
  - Chair: T. Stein
  - Theme: New Occupational Health Horizons

- **Coffee Break:**
  - Poster Viewing & Exhibition

- **New Emerging Risks in European Workplaces**
  - Chair: M. Morrisy

- **Occupational Diseases**
  - Chair: T. Stein
  - Theme: “Occupational Diseases” and Work Health
  - Jointly organized by the World Health Organization and the ILO

- **Health Promotion**
  - Chair: M. Morrisy

- **Opening Ceremony**
  - Theme: New Occupational Health Horizons