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## Psychosocial risk factors at the workplace

MARJAN BILBAN

Following its attainment of independence in 1991, Slovenia has witnessed changing and dynamic socio-economic conditions. The past decade has been marked by the financial and economic crisis that caused a rapid decrease of economic activity and a rise in unemployment, decreased the purchasing power of the general population and caused a worsening of people's living conditions and financial standing. The decade has seen a sharp increase in unemployment, an increased percentage of non-working individuals among the elderly and among young people, as well as an increased number of people living below the poverty threshold. The crisis and its consequences are accompanied by other changes, at societal as well as individual levels: uncertainty and unclear prospects, which can result in individual stress and other negative feelings (sadness, disappointment, depression, anxiousness, fear, worry, doubts or even indifference), feelings of financial, social and psychological deprivation, poor self-assessment of physical and mental health and consequently a greater need for mental care.

Globalization has significantly changed the economic structures and work conditions in all areas. There are workforce fluctuations, jobs are becoming increasingly mobile, employees are subject to physical and mental pressures and violence at the workplace, to poor work organization and shift work as well as shifting and increasing demands. There are some sectors where such risks are particularly aggravated: construction, farming and forestry, transport, etc. The working population is faced by increasing demands to study and acquire new competences in order to produce competitive high-quality products in great numbers and at great speed.

Changes in private life and at the workplace are being introduced much more rapidly than people are able to process them. In our current period of crisis we are thus witness to various organizational changes – workforce downsizing, company mergers, fixed-term work – and people are afraid that they will lose their jobs. Many people go through long or short periods of unemployment and the subsequent frustrating searches for a new job; on the other hand, we are seeing feelings of guilt in those who have kept their jobs. Functional changes are significant as well, i.e. the shuffling of employees to other jobs and assignments within the company and their recruitment for miscellaneous tasks resulting in employees' demotion to assignments inferior to their previous ones. There have also been numerous financial changes: payment according to the employer's subjective assessment independent of productivity and quality of work, as well as uncertain or irregular pay in itself. Timing of the work may also be a contributing factor for occupational stress: changing working hours, shift work, extended workday, part-time employment, split shifts, etc. Psychosocial factors also include discrimination and unfair treatment at work, management styles that exclude employees from any decision processes, lack of communication and poor work organization, tense relations both between employees and the management as well as among employees themselves.

The causes for this situation can be classified into several categories:

- we are trying to increase productiveness and competitiveness by raising the number of working hours and consequently worsening the work conditions;

- transition-related processes (privatization, job cuts, reduction of social rights, stratification of the society – these all serve to intensify the people's sense of uncertainty: employment has become short-term and unsafe, the rules of the game regarding advancement and dismissal have become void or subject to constant changes, and reciprocal loyalty between owners and employees is on the decrease);
- the time of transition is accompanied by a crisis of values. The stereotypical Slovenian values such as diligence, industriousness and modesty are being replaced by efficiency, innovation and status;
- modern means of communication tie us to the workplace even in our free time.

It is a symptom of the situation in Slovenia that out of all factors affecting the quality of employment, the health of employees is primarily determined by the opportunities available to them to satisfy needs related to the physical safety of the work environment. The health of Slovenian employees is primarily affected by the quality of their tangible work environment, and only secondarily by their salary as a factor of adequate fulfilment of needs, which, when fulfilled, also result in advantageous (physical) predispositions for a healthy lifestyle and for the proper fulfilment of health-related needs.

We should also pay attention to the greater percentage of women, who are, in addition to other traditional factors, also subject to poorer education and employment in industries determined to be more at risk in these times of crisis and recession, as well as to greater life expectancy and thus a greater risk of loneliness. We are also seeing an increase in the numbers of the elderly, who tend to be stressed out not only due to the possibility of unemployment but also due to comparatively poor education, due to exhaustion and due to complex work environments unsuitability for the employment of the elderly (jobs are traditionally tailored to young people – working hours, workloads, productivity targets, etc.).

In the past ten years, we thus find that the percentage of those who suffer from stress is on the increase, but is also accompanied by a greater awareness of stress and thus better chances to treat it or rehabilitate the sufferers. We classify such programmes as preventive or curative and categorize them in accordance with the level of their measures as primary (stress mitigation), secondary (stress management) or tertiary (professional treatment of employees). According to their target population, they can either be focused on the relationship between the individual and the company or on the company as a whole. Our efforts should primarily be directed towards measures intended to limit exposure to potential stressors as well as to teach effective stress management. Measures should be put into effect at society level (national, systemic and intersectoral measures), as well as at community level (in the environments where people live) and individual level. They should primarily strive to mitigate and reduce the effects of the crisis that increase various risks posed to individual health and potentially act as stressors. In addition, we should act to reduce factors recognized as those structural elements that increase various risks posed to individual health and potentially act as stressors: discrimination, poverty, poor living conditions, unemployment, etc. At the intermediate level, this includes attempts to reduce or eliminate harmful interpersonal relations among co-workers and any infringement of basic rights at the workplace as well as to improve the atmosphere in all work environments. At the individual level, people should be taught to recognize the precise events and circumstances that cause them negative stress and respond to such events and circumstances appropriately.

There is an increasing number of stress management programmes available on the Slovenian free market, though it should be noted that their quality may be rather suspect. The Department of Public Health, specifically its occupational medicine section, instructs future doctors about

psychosocial occupational risks in the context of the workshop On Psychosocial Occupational Risks, Stress and Burnout (series of lectures that present a number of possible questionnaires and coping, management and reduction strategies) and tutorials in occupational medicine, as these tutorials also include an elaboration of a workplace risk assessment with a description of psychosocial risk factors. Future occupational medicine specialists are further trained to face such problems by the Institute of Occupational Safety and the Institute of Occupational, Traffic and Sports Medicine of the University Medical Centre Ljubljana, specifically at the Occupational Psychology and Health Promotion departments.

New knowledge brought by the EASOM summer school will enrich our expertise and our instruction of students and trainee specialists of occupational medicine. We thus wish you success in your work and a pleasant stay in the heart of the Julian Alps.

## Opening lecture

# Workers' health during crisis in Slovenia

METODA DODIČ FIKFAK

Scholarly and empirical evidence shows extremely negative effects of various forms of restructuring in the sense of higher rates of illness and mortality and reduced employability of people exposed to restructuring. Thus, from the very beginning, restructuring must include the dimension of health, which demands appropriate operating guidelines, innovative approaches, tools, methods, and exchange of expertise and experience between the relevant stakeholders (1).

The results of the national health statistic data bases for Slovenia show that the percentage of sick leave increased in the first year of economic crisis especially in that industrial branches which were the most affected by crisis. The influence of the crisis is evident as presenteeism (mostly in association with mental and behavioral disorders), increased seriousness of some cardiovascular diseases, and increased seriousness of mental and behavioral disorders. Also the increased number of suicides in year 2009 in comparison with 2008 should not be neglected (2, 3).

At the Clinical Institute of Occupational, Traffic and Sports Medicine the group of authors did a research which aim was to realize what the workers' health was like in the manufacture of wearing apparel Mura after restructuring. Two groups of workers were compared: the survivors and dismissed workers. The results of the study show a poor health condition of the surveyed persons affected by the restructuring. A comparison of the study data with the data obtained in the study carried out on the general population showed that in comparison with the general population, the survivors and the unemployed of the Mura company assessed their health as being poorer and they more frequently reported on the diseases investigated. Consequently, they mentioned more frequently that they suffered from elevated blood pressure, elevated cholesterol, stomach or duodenum ulcer, diabetes and depression; the latter is especially pronounced. The actual shares of people suffering from individual diseases could be even higher due to the healthy worker effect. The comparison between the groups of survivors and dismissed shows a significantly worse health picture of the dismissed. The diseases that people suffered from before restructuring got worse during restructuring (4).

The aim of the second study was to establish how indicators of workers' health status which are accessible to the employer influence the employer's decision-making on which workers to retain and which to dismiss during personnel restructuring in the enterprise.

The results show that the disability category and long-time sick leave exert the greatest influence on the employer's decision on the selection of workers; workers with work-related disability and workers with a history of a long-time sick leave have higher odds to be dismissed. An important finding of this study is that occupational physician's opinion primarily affects the dismissal, which is reflected in the withdrawal of a worker with restrictions from the labour market and a reduction of his/her employment possibilities (5).

The results of these studies are important to raise the awareness of the consequences during restructuring and to rethink the role of occupational physicians during restructuring. Namely, it seems that occupational physicians had no role in the last crisis. The second message was to raise awareness of discriminatory issues in medical certification after preventive medical check-ups during restructuring and mostly to find a way out of such discrimination. These are new situations in occupational health which must be carefully further researched and pass the knowledge to students of occupational health.

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## Key lecture 1

# Psychological stress and risk assessment

MARIJA MOLAN

### Abstract

In globalized world of work psychological strain and frequent perception of stress are everyday reality.

Occupational health physicians, psychologists and safety engineers have had experiences in identification, evaluations and reductions of environmental risks at the work places. Due to the implemented health and safety legislation all those obvious risks have been minimized. Real present risk at modern work places is psychosocial stress of psychosocial environment. Poor psychosocial circumstances cause perception of stress and strain.

Identification of psychosocial risk at work place demands different approach comparing to environmental risk. According to our experiences very promising and useful approach is implementation of Critical Incidents Technique –CIT. The method used for this purpose is modification of Flanagan`s critical incidents technique from 1954.

### First step:

Critical incidents are situations at the work places which are stress for majority of workers at those work places. Workers describe in interviews or written situations which are stressful for them. They just describe the situation as precisely as possible. The obligatory elements of these descriptions are:

- the cause, description and outcomes of a critical incident (situation)
- individual feelings and perception of the situation
- actions taken during the incident
- changes (if any) in their future behaviour

Descriptions of situations (critical incidents) reported by workers offer enough data for the next step.

### Second step:

Implementation of Root Causes Analysis-RCA. The method (developed for NASA) helps to identify event`s causes, reveal problems and offers possibility to solve them.

**Third step:**

Critical situations (incidents) reported by critical (in advance defined number of workers) from the same work place are identified as critical risks. More workers reported the same risk; greater is the probability of this risk.

**Fourth step:**

Collection of well-being data from the work place and matching of these data with identified risk prove the presence of risk.

**Fifth step:**

On the basis of root causes analysis the main causes of risk are identified and the most adequate measures and interventions for risk elimination are identified.

**Sixth step:**

On the basis of AH Model (Molan and Molan) identified root causes of well-being decrease and perceptions of stress and strain are compared with possible interventions at the work. Estimated costs of interventions (elimination of critical incident` root causes) are compared with estimated costs of well-being decrease.

The approach combine three methodologies adapted to the management of psychosocial risk at the work place:

- Critical Incident Technique-CIT
- Root Causes Analysis-RCA
- Availability Humanization Model-AH

## Key lecture 2

# Health effects of psychosocial strain

SÁRA FELSZEGHI

However, for a long time not much importance was given to the problem, in our days it is clear that poor psychosocial working environment and work-related stress can have both direct and indirect impact on workers' physical health and mental well-being. Findings of several surveys conducted in EU indicate that the stress-risks due to the working activity, the work-environment and other psychological and social problems, the stress and pressure of work has increased in recent years. Reports indicate that work related stress is among the most commonly reported causes of occupational illness by workers, and they are responsible for serious public health and even economical problems.

A great number of initiatives and measures are issued in Europe targetting the problem, and most of them are to be considered by most of the EU countries, some apply restrictions, others try to motivate employers and employee to apply preventive measures.

In Hungary the problem is reglemented beside the Fundamental Act (the Constitution) by the Decree No. 33 of 1998 of the Ministry of Social Welfare and the Act XCIII of 1993 on Labor Safety of the Minister of Labor.

The major ill-health effects of work related stress are claimed to range from cardiovascular diseases, musculoskeletal injuries, psychological disorders (clinical depression, anxiety, burnout, Monday morning sickness) and many other effects like digestive system or tumour diseases.

Absenteeism, work-related sick leave, disability due to stress are major causes of the serious concern the problem is handled. In our days the possibilities and the role in prevention and workplace health promotion of the occupational medicine are increasing, but are not explored sufficiently, thus the teaching of psychosocial risks factors gets a special emphasis both in graduate and postgraduate education.

The presentation is aimed in offering a short overview of the possible health consequences of the stress and pressure in working environment, starting with feeling modest dysfunction or some associated discomfort, easily reversible effects, although still damaging the quality of life at the same time, which under some circumstances, might translate into poor performance at work, into other psychological and social problems and into poor physical health, and pointing out that stress-related disabilities are among the most rapidly growing forms of occupational illnesses.

# Organisational Stress – a management model

DIL SEN

## Background

“Psychological hazards are those which relate to the interaction between job content, anagement systems, environmental control on the one hand, and workers’ competencies and needs on the other” [ILO]

Stress is a natural reaction to excessive pressure. It is not a disease till it is excessive and/or goes on for a long time, when it can lead to physical and mental ill health. It is a process that happens over time and to people with the individual’s perception and cognition being very important, especially their perception of CONTROL. There are usually two possible imbalances: demand versus coping capacity [Karasek & Theorell]; effort – reward paradigm [Siegrist].

## Aim

To consider a MANAGEMENT MODEL for dealing with organisational stress using the HSE Stress Management Standards [[www.hse.gov.uk/stress](http://www.hse.gov.uk/stress)] and the principles of the management of health and safety risks in the workplace.

## Method

The FIVE steps to managing stress are: policy and procedures; organisation of staff; planning and setting standards; measuring performance; audit and review. [HSG 65 – Health and Safety Executive, UK]

## Conclusion

At an organisational level, “symptoms” of work-related stress may be described as emotional (low morale, loss of employee participation/cooperation) or behavioural (high absenteeism and staff turnover, poor industrial relations, increased accident/illness rates).

With a STRESS POLICY and procedures in place, good communication at all levels in the organisation, appropriate training of managers and staff, regular monitoring, both active and passive, and audit and review, organisation stress can be properly managed.

## **Teaching of psychosocial issues in occupational medicine and case management - from the Norwegian perspective**

KRISTIN BUHAUG

“Psychosocial issues” include a broad spectrum of subjects relating to work organization and possible effects on workers, organizations and the society at large. In my presentation I will focus on the aspect of workplace bullying and harassment that has shown to have detrimental effects on health outcomes. This relates to experiences at Jobbfast; outpatient clinic for targets of bullying and harassment at work. I will describe teaching on bullying and harassment in general and potential outcomes at three levels; patients, students and occupational health personnel. Lastly, I will discuss whether the assessment program at Jobbfast can be relevant for other patient groups in the field of occupational medicine.

## **Posttraumatic stress disorder and prevention at the workplace**

MIRJANA DAMEJ

By definition, Posttraumatic Stress Disorder (PTSD) is a process in which »the person has been exposed to a traumatic event in which both of the following were present: a) the person experienced, witnessed or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to a physical integrity of self or others and b) the persons response involved intense fear, helplessness or horror. Persistent reexperiencing of the traumatic event, persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness, persistent symptoms of increased arousal for more than a month after the event should be main diagnostic criteries.

In addition to the above, Leymann already spoke of PTSD as a consequence of mobbing in the workplace , as do many more recent authors. Sometimes it is named Prolonged Duress Stress Disorder (PDSD) . Symptoms and signs of PTSD according to DSM IV are all commonly found in mobbing victims. Mobbing experiences produce strong emotions within the victim. Via neuronal pathways these emotions activate different brain areas connected with endocrine glands and autonomous nerve pathways. Resulting hormonal output changes cardiovascular functioning (epinephrine, norepinephrine) or/and immunological and metabolic response (corticosteroids). At first reversible, these changes may become permanent and with time cause pathological damage and illness.

Without proper treatment, PTSD may cause serious psychiatric and physical problems in the long run. Prevention is of vital importance to employees and organisation. On a personal level, empowering the employees, clarifying communication issues, stressing the importance of fitness and relaxation ensures proper response to developing mobbing processes, thereby preventing PTSD. On organisational level, zero tolerance for mobbing, initiating assessment and treatment quickly after the traumatic event, having policies and guidelines to be applied , informing the employees about them, creating a set of standards of conduct, maintaining good organisational climate and firm leadership will all do much toward prevention ob PTSD and its consequences.

## **Primary prevention in practice - Workplace mental health promotion**

SABINE GRIEBEL

Mental health is of prime importance for all occupational health physicians who work in companies. The author presents some examples how her company is engaged in primary prevention considering legal requirements (risk assessment for psychic stress and strain) and developing new structures (implementation of health officers and health coordinators) to support the employees.

# Primary prevention in practice - Workplace mental health promotion

JADRANKA MUSTAJBEGOVIĆ

## **Background**

Health promotion in the workplace is a multidimensional concept that embraces health as largely the product of individual behaviour and as an individual responsibility, while at the same time being influenced by a number of forces, a significant number of which are outside the individual's control. Thus the workplace is seen not only as a venue through which various programmes can be delivered but as an influence on health in both its psychosocial and physical dimensions.

## **Aim**

To introduce teaching of psychosocial risk factors at work in Croatia - a wide scale of occupational levels.

## **Results**

The enormous human and economic costs associated with mental health issue at the workplace suggest that initiatives designed to prevent and/or reduce employee mental health disorders should be high on the agenda of workplace health promotion programmes. The National Strategy for mental health in the period 2011-2016 in the Republic of Croatia has a purpose to comply with the already adopted complementary strategies in other areas, particularly those in the field of occupational health. According to the Croatian Occupational Health Insurance Act, Occupational Health Protection Act and Pension Act (Official Gazette 71/14, 118/14, 154/14) psychosocial risk factors and acute worksite stressful experience are considered as an occupational injury/disease. They should be reported to the State inspectorate at the separate Report form for each case of occupational injury/disease that is harmonised with the ESAW report methodology and is applied for informing the Croatian Health Insurance Fund.

## **Conclusion**

Following needs in practice, the teaching of psychosocial risk factors at work in Croatia is organised at the university level within the postgraduate specialist occupational health and continuous medical education programmes, at the level of the Croatian Institute for Health Protection and Safety at Work as continuous medical development according to the national programme and as the member of the European Network Education and Training in Occupational Safety and Health (ENETOSH) and the European Network for Workplace Health Promotion (ENWHP) respective programmes, and the level of the Croatian Occupational Health Society operating under the wing of the Croatian Medical Association.

## **Key words**

mental health promotion, healthy workplace

## Workplace mental health promotion in Romania

ELENA-ANA PĂUNCU

### Abstract

Since 2002 Romania has a Mental Health Law. Ministry of Health has launched a Mental Health Strategy and National Program for Mental Health (MH) within the recent years. The Ministry of Health considers MH as a priority.

Suicide rates are slightly above the EU27 average, (12.8 per 100,000) (Eurostat). It is estimated that there are approximately 1018 new cases of mental disorders per 100,000 per and about 1% of the population suffer from mental disorders. In 2003 there were 166,594 people, of which 28,895 children, registered with various forms of mental disorders. 8.6 % of those were living in institutions.

In the Occupational Health activities, by law, workplace health promotion is compulsory in enterprises since 2007, as part of workers' health surveillance.

Romanian residents in Occupational Medicine have, in their Curriculum (last upgrade, 2007), stages of occupational psychology (one month, in the first year of OH residency), professional mental aspects (two weeks in the second year of residency) and a psychiatric stage (two weeks in the third year of residency), but no WHP training.

There are no specific, systematic activities in the workplace mental health promotion in Romania, but there were carried two parallel projects in 2 regions (Center and Western Region) in 2009-2010, conducted by Romtens Foundation in partnerships with ENWHP members. The aim was to implement WHP (including MHP) activities in as many as possible enterprises in two Romanian development Regions. One topic was "stress".

A Doctoral Thesis in Sibiu Medical Faculty was conducted in 2012 with the title "Occupational Health Research into the Mental Health Promotion at Work" (Dr. Mihaela Haratau, coordinator – Prof. Dr. Dorin Iosif Bardac). The purpose was to look into the professional causes that might influence mental health (stress and organic solvents) and to prove that the workplace could be an appropriate environment for MHP.

Mental health promotion can and must be made at the workplace. OH physician is an important partner in the enterprise whose education and activity must be focused on prevention and health promotion in the next years.

## **Fit For Work Programme – an Efficient Way to Promote Mental Health at Work**

EVA STERGAR, TANJA URDIH-LAZAR

We shall present an efficient way to promote mental health at work – Fit for work programme, which has been developed at the Clinical Institute of Occupational, Traffic and Sports Medicine since 2005.

First, some data on mental health / disorders, problems, diseases in active and general population will be presented as well as their consequences at different levels (individual, enterprise, societal).

Basic concepts – health, mental health, health promotion, workplace health promotion, and basic principles for WHP will be discussed.

The core of presentation will be focused at Fit for work programme as well as planning and implementation of workplace mental health promotion programmes according to Fit for work method.

# **Workplace health promotion programme: fit for work at the University medical center Ljubljana**

NATAŠA DERNOVŠCEK HAFNER

## **Keywords**

workplace health promotion, hospital, employees, ergonomics, organizational culture

## **Introduction**

Fit for Work at the University Medical Center Ljubljana (UMC Ljubljana) is a programme promoting health at work intended for workers employed in the institution. The aim of the programme is to raise awareness of both employees and employers, to educate and train them in a healthy work style and lifestyle and motivate them for positive changes.

The presentation is about the concrete actions, which have been implemented in the institution and in a selected model unit – the Clinical Department of Nephrology (CDN), in the field of ergonomics and organizational culture.

## **Methods**

Before determining concrete activities in an organization connected with workers' health, their well-being and safety at work, it is necessary to analyse the data available for the company which is the first phase in the identification of problems of health and safety in a company. We were interested in the data on diseases, injuries and staff turnover. They are established by measurable indicators of health for this company, on the basis of which we can develop recommendations for the improvement of the workers' health.

Since the data obtained at the National Institute of Public Health (NIPH) refer to the entire UMCL, a Health at Work Questionnaire was distributed at the CDN in order to determine the priority problems in the field of health and safety at this department.

## **Results**

The analysis of health showed that in the ten-year period (between 2004–2013), sick leave in the institution is higher than the average for health service as well as the average in Slovenia, the most frequent is in the category of musculoskeletal system and connective tissue disorders. This category of the disease represents the main reason for sick leave in women, women being the predominant employment group; those employed in nursing obtained the greatest share of sickness benefits.

Data for December 2013 show that out of 7669 employees, the UMCL employed 480 workers with disability categories II and III, which represents 6.26% of all the employed. The data for half of the year 2014 show that the number of workers with disability increased by 3.4%.

At the CDN the analysis showed artificially low sick leave taking annual leave, time off instead of sick leave, high presenteeism and increase in disability. On a basis of analysis, the field of ergonomics and the field of organization have been determined for this department, as priorities.

### ***Implemented measures***

The main implemented measures at the UMCL were as follows:

- an internal campaign "Fit in the UMC Ljubljana".
- education and experiential learning workshops for the employees, with the following topics: ergonomic measures in the workplace, correct lifting and handling of loads.
- organization of day for health: with workshops on ergonomics, presentation of an active break, stalls with materials and a hike for the employees.

At the CDN, the concrete actions were beside in the field of ergonomics (education and experience workshops, active breaks ...) focused also on organization level. Supervision was organized for those employed in nursing, the aim being to unburden the employees in order for them to constructively process stressful situations.

Motivation interviews for disabled workers were conducted and proposals for the workplace improvements are being made.

Toward the end of a year, some sets education courses for the employees in the ward are planned with the following topics: successful communication in the working environment, communication with demanding patients and their relatives as well as techniques for solving conflicts and the organizational structures of working hours, breaks and rests as one of the main organizational stressors and the organization of shift work.

### ***Conclusions***

Workplace health promotion should become an essential part of any business. It is the foundation upon which the businesses success and employees' (psychosocial) well being both depend.

# Management strategies for psychosocial risks at an organisational level

TIHOMIR RATKAJEC

## Background

Psychosocial factors (PSF) or psychosocial stress what are they? Some authors refer: control at work and life, involvement in social group, life events, perceived stress, depression, social isolation, socioeconomic status (income, position at work and society, education), social inequity.

Psychosocial factors at work or psychosocial working environmental? What are they? Job demands cognitive as well as quantitative ,job control (influence, potentials, meaning, involvement at work), leadership (reward, role conflict,) social support from colleagues and supervisors, monotony, high work pace, accidents, shift work, downsizing, outsourcing, job satisfaction (1)

Today we are interested in the social component of the working environmental. Why?

Work has a very central role in most people's lives (meaningful life, sense of self esteem, economic independence, social relationships..). Most adults people spend a large part of their life at work. As a consequence, conditions at workplaces are likely to be of considerable importance for people's mental as well as physical health and wellbeing. Further working situations are changed and its are changing today's time. In modern western society this seem to be logic because physical demands are diminishing and the increasing complexity of the work. The process of globalisation and tendency to profit in the last time are an important role.

Complexity? New technology, new knowledge, personal computer, global link, internet...., fast and abounding of information, miniturization of equipment...

Globalisation? To work much, longer, over regular working time («less people should do more»), to achieve lower prices, to be on the global and local market, moving of production to other developing country, lean production (just in time production), downsizing and restructuring of enterprises (2) increasing demand for efficiency

Owner wish to have profit (higher and more higher), stocks actions are influenced, capital is on the first place some people's values.

All of them influence to demands of the work and little scope for the decision making. If the demands are under condition over which person has no control the result can be stress

## Stress mediators

Fundamental question in stress is how stress system mediators such as corticosteroid hormone can change the action from protection to damage. If the stress system respond slowly and when stress reactions persist, its mediators enhance vulnerability to disease for which the individual is

predisposed (3). Gender and psychological factors are more important than biological factors in explanation of differences in epinephrine response in stress (4). Because of some workers responded on same work environment as stressful, somebody else as stressless. Measurement of adrenaline, noradrenaline and cortisol can be used as indicators of work-related stress, but taking samples and analyses have disadvantages. The stressful character of a psychosocial factors can assess by using self-report data from questionnaires. But complexity and variability of work psychosocial situation require development of models (5).

### **Models of stress at work**

Conceptual and methodological differences between demand-control (DC) and effort-reward imbalance models are existed. DC model is restricted to the structural aspects of the psychosocial environmental, whereas ERI model includes both structural and personal characteristics. Components of ERI model as salary, job security, career opportunity are linked more with macro-economic labour market conditions while DC is focused on work place characteristics. Control at work and reward have different implications for policy: control paradigm points to the structure of power and influence and democracy at work, reward addresses to the issue of distributive justice and fairness (5). Both models are appropriate in research and daily work of occupational physician.

### **What we were researching**

What we were researching last two decades and which model and questionnaire were using?

In the study in 2000 year we use Karasek DC model for estimation of PSF in the connection with low back pain. LBP was analysed by using Nordic Musculoskeletal Questionnaire. High psychological demands are increased risk of LBP ( OR = 2.96 ) High risk of LBT had workers who expressed an anxiety and depression (Zigmond, Snaith scale). An explanation: in experimental study it was demonstrated an activation of motor muscular units by physical as well as mental stress (6).

The second study showed that the active men (high demand and high control) had a higher risk of MI (OR = 2,2, CI = 1,6-2,8) than men from the other categories DC model (passive, high strain, low strain).

The next study we found that the workers with ischemic heart disease had a higher risk of IHD due to higher work demands (OR = 1.25), worse job control (OR = 1.23), frequent smoking (OR = 2.2), leadership positions (OR = 3.97), higher BMI (p = 0.059) and higher levels of triglycerides (p = 0.005) and LDL-cholesterol (OR = 1.65) and lower level of HDL-cholesterol. We developed an extended questionnaire for this study. The core was DC model, some components of ERI model (job insecurity, carrier potential, job satisfaction), and questions about conventional risk factors for cardiovascular disease were added.

In following study we translated questionnaire for need for the recovery due to working load and were searching association between PSF and need for recovery (NR). There was a significant linear positive relationship between 'psychological demands', control at work and conflict at work and need for recovery in group of physicians.

Good association was between burnout and psychological demands ( $r=0.58$ ) and taking of analgesics, smoking, need for a breaking during work in nurse workers. We used questionnaire of DC model and for work ability index. Some questions about organisational factors at work we included in study.

## Conclusion

We have tools for assessment of PSF at work. If we want research specific problems in working population we should take additional questionnaire as: about conventional risk factors for cardiovascular disease, musculoskeletal disorders, need for recovery after work, about socioeconomic situation, position at work, about stressful life events, ergonomics of workstations, organisational factors at work. On the basis of systematic observations (researches) occupational physicians have a mission and task to refer and advice to employers (mangers) how they should improve mental health and wellbeing of their workers primary by workplace health promotion.

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## Psychosocial risk factors at work

ANDREA EGGER, JASMINKA GODNIĆ-CVAR

### Summary

Jahoda et al. (1982) defined 6 functions of work, which protect workers as far as their psychological and physiological health is concerned. If there is a lack of these factors there is a significant increase of psychosocial stress observed.

Beside the manifest function of gainful occupation there are the latent functions like:

time structure, social support, collective goal setting, status, identity and constant activity.

In this session we will talk about the Model of Latent Deprivation (Jahoda, M. (1981). *Work, employment, and unemployment: Values, theories,*

and approaches in social research. *American Psychologist*, 36, 184–191., Jahoda, M. (1982). *Employment and unemployment: A social psychological analysis*. Cambridge, England: Cambridge University Press. Jahoda, M. (1997). *Manifest and latent functions*. In N. Nicholson (Ed.), *The Blackwell encyclopedic dictionary of organizational psychology* (pp. 317–318). Oxford, England: Blackwell.

There is also a lot of empirical evidence of the model (dePaul, K.I., & Batinic, B. (2010). *The need for work: Jahoda's manifest and latent functions of employment in a representative sample of the German*

population. *Journal of Organizational Behavior*, 31, 45-64. Selenko, E., Batinic, B., & Paul, K.I. (2011). *A longitudinal investigation of the*

latent and manifest benefits of work and psychological health. *Journal of*

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Another focus of the session is in the factors of resilience (Ryff, 2012). *What does resilience mean and what about the psychological and physiological interventions to strengthen resilience in workers and therefore protect them from psychosocial stress at work.*

## **Patient with breast cancer – a case study**

DIANA JELEČ KAKER

The treatment of cancer patients is complex and requires special adaptation and organization of medical care. Social-medical counseling unit is one of the organizational entities at IOL. The specificity of this unit is that it employs a nurse and two social workers as members of a multi-disciplinary team. The nurse cares for the medical education of the breast cancer patients, while the social workers do counsel work.

The multi-disciplinary approach is aimed at providing the cancer patients with comprehensive care and with it the highest possible quality of life, concentrating on the conservation of self-esteem, positive self-image and the possibility of gradual return of the patients to the work force. Our unit offers the cancer patients support in coping with the newly arisen situation and empowers them for a quality return to their home environment and work rehabilitation.

Cancer patients are referred to our unit by their physicians. The nurse and/or social worker talk to the patients, providing them with necessary information, instructions, medical education and counseling.

This article will be an example of a patient referred to our unit due to the need for a medical device and social care services.

# **Effective rehabilitation and return to work requires an personalized multidisciplinary approach with interventions at work**

LODE GODDERIS, HUGUETTE DÉSIRON, MARTHE VERJANS, CHARLOTTE LAMBREGHTS,  
MYLLE GODEWINA, SOFIE VANDENBROECK

## **Introduction**

Fifteen percent of the Belgian employees are dealing with long-term health problems of which the half experiences work ability problems. The limitations increase with age resulting in a higher risk of long-term sickness absence. As in other European countries, the main causes of long-term sickness absence are musculoskeletal (MSD; 28,8%) and mental disorders (34,8%) according to the National Institute for Health and Disease Insurance. Various chronic diseases, such as cancer are becoming more prevalent in the ageing workforce in combination with an improved cure and care. Unfortunately, the employment rates of people with a disability are 40% below the average level, and unemployment rates are twice as high. Eurofound recently reported that 80% of the workers who are more than 6 weeks absent require support to return to work (RTW). In Belgium, RTW is only marginally addressed and mainly focused on 'providing information' and 'control of sickness absences'. Fortunately, in 2014, the legislation changed, making employees on sick leave legally entitled to contact the occupational physician to discuss RTW. In order to facilitate return-to-work for employees on sick leave, we have developed early RTW interventions and set up several studies to implement and assess them.

## **Methods**

In a first study, an RTW program based on the Sherbrook model was implemented in five Belgian organizations employing 1200-3800 workers. Every employee absent for longer than one month was invited by the human resources manager (HRM) to consult the occupational health physician (OHP). The OHP made an assessment and RTW plan together with the patient. During the process the OHP was in contact with involved caregivers and stakeholders. Regular follow-up was organized also after RTW. Depending on the disorder the patient was referred to a psychologist or ergonomist to tackle the barriers at work and improve working conditions. In a second study, we are developing and embedding a RTW intervention in the diagnostic and cure process of breast cancer patients of a specialized center; hence often general practitioners and specialists are not aware of the advantages of RTW both for the improvement of the quality of life and rehabilitation of the patients.

## **Results and discussion**

In the first study, a total of 150 employees joined the RTW program. The average age was 48 years. On average there were 4 contacts between the worker and OHP. Fifty and 30 % of the

participants was absent due to respectively MSD and mental disorders. Fifty% of the cases were referred to the ergonomist, 10% to the psychologist and 10% to both. Three months after the end of the project, 70% of the participants returned to their previous work. 5% was in a progressive RTW-program and 20% was still absent. The majority of the participants was positive about this approach and would recommend it to their colleagues. Also HRM and supervisors were positive towards the program and believed it contributed towards a positive interaction with employees on sick leave. Supervisors are willing to take responsibility in the reintegration process but express the importance of being fully informed about the RTW program, its implementation and the role of every stakeholder. In a second study, we have developed RTW programs including an intervention at work embedded in the diagnostic and curative process that aims on facilitating a patient-tailored RTW process including all stakeholders. The RTW process in this study was coordinated by a case-manager who included stakeholders in the process on the moment their expertise is needed.

## **Conclusion**

Successful reintegration requires the involvement of the patient and a clear communication between all stakeholders from the start because they all play a crucial role in the return-to-work process. The RTW approach enables patients and stakeholders to collaborate in reaching enhancement of the patient's quality of life.

## **Workers' fit-note: Innovations in teaching and research**

RAYMOND. AGIUS, L. HUSSEY, H. DAVIES, J. DODMAN, A. MONEY, C. RAYNER, D. SEN, N. ZARIN, Y. ZHOU

### **Background**

'Tertiary prevention' might be better achieved if workers who have been on sick leave return to work with a medically certified 'fit-note' indicating the precautions which should be taken to facilitate their return to work. This advice should assist rehabilitation and reduce the risk of recurrence of ill health.

### **Aims**

This work investigated the effect of the introduction of a 'fit-note' written by General Practitioners (GPs) in cases of work-related sickness absence (SA). It also describes the development and preliminary evaluation of online educational resources to help GPs and occupational physicians (OPs) learn about, audit, and benchmark the management of their cases of work related ill health (WRIH).

### **Methods**

The initial research database consisted of 5517 consecutive prospectively collected incident cases of WRIH reported electronically by GPs to The Health and Occupation Research Network (THOR) <<http://www.coeh.man.ac.uk/thor>> before and after the introduction of a 'fit-note' in 2010 in the UK. Data collection and further analysis is ongoing. The results were used to iteratively develop an online educational resource, in parallel with THOR and entitled Electronic Experiential Learning, Audit and Benchmarking (EELAB) <<http://www.coeh.man.ac.uk/eelab>>. EELAB was designed to access interactive resources preferably by entering data about actual cases. It offers logged disease-specific online learning (covering about 80% of cases) and self-assessment both for GPs and OPs. EELAB also offers self-audit of clinical management against external standards and benchmarking against their peers' practices as recorded in the research database.

### **Results**

Psychological/mental disorders accounted for about one third of the incident cases of reported WRIH but for more than a half of the certified SA. Before the introduction of the 'fit-note' and average of 50% of the incident cases of WRIH were medically certified as needing SA; and this proportion did not change in the first year post 'fit-note'. In the four years post 'fit-note', the average of the annual proportion of cases with medically certified SA was 47.5%, being lowest

in the second year post 'fit-note' (41%). There was no statistically significant linear trend. However in the four years post 'fit-note' an average annual proportion of 16% of the cases of WRIH, whilst not being certified with SA were nevertheless given written 'fit-note' advice such as about workplace adjustments or a phased return to work. The EELAB resource was made available from 2011 to 250 GPs in THOR in the UK, and since then to increasing numbers of specialist OP trainees, and GPs in the UK and in the Republic of Ireland. Feedback by questionnaire or in person has been generally very favourable, but further development by iteration is continuing. External peer reviewed evaluation resulted in accreditation by the Royal College of General Practitioners (2012-2014).

## **Conclusions**

The introduction of the UK 'fit-note' in 2010 did not result in a significant change of the proportion of cases of WRIH in the THOR GP database who were given medically certified SA. The development and delivery of a parallel online learning, audit and benchmarking resource based on these cases has achieved good qualitative evaluation. However further prospective research is warranted to determine whether such resources will ultimately result in improvements in SA as well as workers' well-being.

## Return to work with partial sick leave in Finland

SOILE JUNGWELTER

The need to increase work participation of working age people is a matter of concern in many Western countries. In Finland, legislation on partial sickness benefit was introduced in 2007 and confirmed 01. 01. 2010. The new benefit allowed for the first time to combine part-time sick leave (PTSL) with part-time work. Partial sick leave is always medically certified and it is voluntary for the individual. The employer is entitled to decline the use of the benefit in case the work arrangements needed at the work place are not feasible.

Table 1. Part-time sick leave in Sweden Norway, Denmark and Finland in 2013

|                            | Sweden  | Norway   | Denmark                              | Finland                             |
|----------------------------|---|--|--------------------------------------|-------------------------------------|
| <b>PTSL in % /N</b>        | ca 40%  | ca 20%   | ca 15-20%                            | ca 3% / 10 798                      |
| <b>sex<br/>(w = women)</b> | 60-70% w  | 60-70% w                                       | 60-70% w                             | 60-70% w                            |
| <b>diagnosis</b>           | MD, MSD   |  | like full SL                         | MD, MSD                             |
| <b>occupations</b>         | social, health,<br>public<br>administration,<br>education | social, health,<br>trade, hotel,<br>gastronomy | administration,<br>office, education | social, health,<br>office, industry |

The latest Finnish studies (<sup>1</sup>Viikari-Juntura E et al. 2012, <sup>2</sup>Kausto J et al. 2014) show that an early part-time sick leave may provide a faster and more sustainable return to regular duties than full-time sick leave among patients with musculoskeletal disorders (MSD)<sup>(1)</sup>. The beneficial effect of partial sick leave was seen in mental disorders (MD) as well<sup>(2)</sup>.

In Finland 43% of companies and organizations had used the part-time sick leave in 2010 (Masto-hanke, STM). The employees feel positive concerning their recovery. Part-time sick leave improves the chance of returning to regular working hours only if there are good return to work practices which are worker-centred.

## Vocational rehabilitation in Croatia

NADA TURČIĆ

In the Republic of Croatia the rights of persons with disablement are regulated by international as well as national documents.

The foundations in the national legislation may first of all be found in the Constitution Act of Republic of Croatia, which directly emphasizes the special care needs for people with disablement and their inclusion in social life. Constitutional provisions regarding the protection of persons with disablement, i.e. regarding their rights, were further elaborated in the National strategy of Equalisation of Opportunities for Persons with Disabilities from 2007 until 2015. The republic of Croatia expressed its commitment to implement the active policy of human rights, which arises from the adoption of international key documents as well as contemporary standards in this field and reflects in their embedment into the national legislation and implementation in practice.

Vocational rehabilitation aims to promote employment of people with health issues. It is deemed to be one potential way to enable people with disabilities to work and thus increase the overall employment level. Return to work is usually the main outcome measure of vocational rehabilitation.

According to the Act on Pension Insurance, a reduced work capacity occurs in the an insuree's work capacity, due to permanent changes in his or her health that cannot be cured, is reduced for more than one half compared to a healthy person of the same or similar education. Jobs which serve for the assessment of such insuree's work capacity are all jobs which correspond to his or her physical and psychological abilities and which are considered as corresponding to his or her previous jobs. Residual work capacity of an insuree exists in case there is a reduced work capacity however, according to his or her health condition, age, education and capabilities, such insuree can be professionally rehabilitated to perform other full time jobs.

Vocational rehabilitation is a group of activities (practical acquisition and application of knowledge, skills and routines) aimed at rehabilitating a disabled worker to work, thereby preserving his or her residual work capacity. Occupational rehabilitation covers the following procedures:

- retraining – training/education to perform jobs different from those the insuree performed before, or
- additional training – supplementary training to perform jobs in accordance with the residual work capacity.

If reduced work capacity with residual work capacity occurs before the age of 53, the insuree can be rehabilitated.

In case of injury at work place or occupational disease, the insured person keeps this entitlement regardless of the length of Pension Insurance. Pension Insurance covers salary compensation during vocational rehabilitation, and a period of 24 months after the person becomes unemployed.

The Croatian Employment Service carries out vocational rehabilitation of the disabled persons who are unable to exercise this right in another way, thereby creating equal employment opportunities for people with disabilities.

We believe that the New Act of Vocational Rehabilitation will enable the disabled persons to increase work efficiency at all levels with equal opportunities. This will also improve quality of their lives.

## **Teaching psychosocial risk factors at work in the process of vocational rehabilitation**

METKA TERŽAN, TEJA BANDEL, ALEKSANDRA DENŠA

Vocational rehabilitation programme for unemployed persons with disability is provided in the Vocational rehabilitation centre in the University rehabilitation institute of the Republic of Slovenia.

Team approach is accepted and the members of team are physician, specialist of occupational medicine, social worker, psychologist, occupational therapist and rehabilitation instructor. Programme base on the bio-psycho-social model. We collaborate with employers and try to minimise the risk of the unsuccessful employment process.

Our experience confirms existing research findings that besides organisational and ergonomic problems psychosocial risks are at the greatest importance.

We offer special services to our clients during vocational rehabilitation and they are prescribed by Standards of Vocational rehabilitation approved by Ministry of Labour.

The theme of psychosocial risk factors is included in service Advising, empowerment and motivation of clients to active role, Acceptance of disability, Development of social knowledge and skills, but it is possible to tackle them in all other services. Questionnaire Wrij Baan is used to measure development of empowerment of clients during our programme. We also interview our clients with QUOLIS questionnaire about changes in quality of their life and among other issues we check psychosocial factors.

During on the job training we use Case-management approach to help employer overcoming psychosocial risks. Every professional from team can be the case manager and is in regular touch by employer. In the case of complications they can ask other members of the team to help the client or/and employer with their specific knowledge.

We forward this approach to all students who attend to this programme. We present them the role of every professional in the team and teach them to collaborate in the team. We present them our methods and skills to overcome the psychosocial risks at work.