Promotion of occupational and public health: the European experience and challenge

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Abstract

A wide variety of living and working conditions are powerful determinants of health. And health, in turn, affects the living and working conditions and productivity of all individuals and populations. The awareness of this crucially important interrelationship has been spelt out clearly by our two governments, as well as by the World Health Organization and the Commission of the European Communities. It is, however, not implemented in practical politics. Neither is it applied more than marginally in medical education and clinical practice. Based on surveillance at individual workplaces and monitoring at national and regional levels, occupational and public health should be promoted by job redesign (e.g., by empowering the employees, and avoiding both over- and underload), by improving social support and by providing reasonable reward for the effort invested by workers, as integral parts of the overall management system. And, of course, by adjusting occupational physical settings to the workers’ abilities, needs and reasonable expectations – all in line with the EU Framework Directive and the EU Framework Agreement on Work-Related Stress. Supporting actions should include not only intersectoral and interdisciplinary research but also adjustments of the curricula in business schools, in schools of technology, medicine and behavioural and social sciences, and in the training and retraining of labour inspectors, occupational health officers, managers and supervisors, in line with such goals.

Key words: occupational health, public health, stress medicine, health promotion, systems approach

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In the Constitution of the World Health Organization (WHO), health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. There is no doubt whatsoever that a wide variety of living and working conditions are powerful determinants of health, for better or for worse. The relationship works both ways. The conditions affect health. But health more often than not also affects a person’s productivity and earning capacity as well as his or her social and family relationships. Needless to say, this holds true for all aspects of health, both physical and mental.

Is there a problem?

However, before issuing any “call for action” as to what to promote, and how, we need to consider whether there is, indeed, a problem – whether stress and depression related problems are widespread, have serious consequences, are becoming more prevalent and severe – and are accessible to interventions. Available evidence indicates that the answer to all these questions is affirmative. According to the World Health Organization (2001a), “mental health problems and stress-related disorders are the biggest overall cause of early death in Europe”.

But they are not only a matter of premature mortality. According to the same report, mental ill health and related disorders are among the major health concerns in Europe today. In particular, depression, suicide and other stress-related conditions together with destructive life-styles and psychosomatic diseases, cause immense suffering to people and their families, as well as placing “a great economic cost on society” (WHO 2001a).

How great, then, is this “economic cost”? According to a report prepared within the framework of the Finnish EU Presidency and quoted by the International Labour Office (2000), the cost of mental health problems in the 15 Member States of the European Union is estimated to be on average 3–4 per cent of GNP. If we approximate the percentage to, say, 3.5% and use the EU GNP (7,593 billion euro) as a basis for calculation, the cost would amount to 675 billion euro.

In its recent Report on Swedish Public Health, the National Board of Health and Welfare (2005) points to some positive trends (in terms of life expectancy and functional capacity), but also a number of clearly negative ones with regard to self-reported mental health, wellbeing, fatigue and sleeping problems, alcohol related problems and obesity.

The root causes

But do we know the root causes of such outcomes, and, if so, are they amenable to change? According to WHO (2001a), mental health problems can be caused by a combination of circumstances: biological, social and psychological factors, and stressful events. They are usually associated with difficulties either in our personal lives or due to the wider environment in which we live.

In its analysis of such circumstances, the British Government (1998) drew attention to five different types of determinants, and highlighted each of them. The “fixed” factors (e.g., genes, sex, ageing) are difficult to adjust, whereas successful interventions are feasible against those listed under the other four headings: social and economic (e.g., employment, poverty, social exclusion); environmental (e.g., air and water quality, housing, social environment); lifestyle (e.g., diet, physical activity, tobacco, alcohol, drugs); and access to and quality of services (e.g., education, NHS, social services).

The causal significance of the latter four types of factors has been analysed by Wilkinson and Marmot (1998). The authors conclude that the “solid facts” are:

• Social and economic circumstances affect people’s health strongly throughout life;
• Work-related stress increases the risk of disease as do unemployment and job insecurity;
• Social exclusion creates health risks, while social support promotes health and well-being;
• Individuals may turn to alcohol, drugs and tobacco and suffer as a result of their use, but this process is also influenced by the wider social setting, which is often beyond individual control.

Possible “root causes” in the Swedish society could include that every fifth adult of working age has been excluded from working life since 1993, mostly due to significant increases in long-term sick leave and premature retirement, as well as in demands at work and outside it in the working population (National Board of Health and Welfare 2005).

The Science-Policy-Implementation gaps

The awareness that this situation and the options for preventive interventions has existed for quite a while, with a very considerable and growing body of evidence to support it (Levi 2001; Antoniou, Cooper 2005). In spite of this, there is still a wide science-policy gap, and an even wider one between policy and implementation.

In 1970, WHO and the University of Uppsala co-sponsored a high-level international, interdisciplinary symposium on the broad scope of “Society, Stress and Disease” (Levi 1971). It was followed up by four subsequent symposia with a specific focus on major phases of the human life cycle, from the cradle to the grave (Levi 1975, 1978, 1981, 1987), summarizing a host of scientific evidence as a basis for subsequent policy formulations and implementation.

In 1973, WHO designated the Stress Research Department at the Karolinska Institute as its first collaborating centre on psychosocial factors and health. In 1974, the 27th World Health Assembly was devoted to an in-depth discussion of this field. In 1979, the U.S. Surgeon General’s report on disease prevention and health promotion included a chapter on psychosocial factors in preventive medicine (Levi 1979). Following a series of agency specific and joint consultations and workshops, the Joint ILO/WHO Committee on Occupational Health issued its report on “Psychosocial Factors at Work: Recognition and Control”. It was subsequently endorsed by the ILO Governing Body and the WHO Executive Board and published (ILO 1986) as a set of joint recommendations to the social partners world-wide.

Soon after, WHO compiled and published its state-of-the-art document on “Psychosocial Factors at Work and their Relation to Health” (Kalimo et al. 1987). In 1992, this was updated in an ILO report – “Preventing Stress at Work”.

Widespread morbidity and mortality

During the 90s, the European Foundation for the Improvement of Living and Working Conditions conducted and published three major surveys of working conditions and workers’ health in the EU Member States.

According to the most recent one (European Foundation 2001), more than half of the 160 million workers in EU15 report working at a very high speed (56 per cent), and to tight deadlines (60 per cent). More than one third has no influence on task order. 40 per cent report having monotonous tasks. Such work-related “stressors” are likely to have contributed to the present spectrum of ill health: 15 per cent of the workforce complain of headache, 23 per cent of neck and shoulder pains, 23 per cent of fatigue, 28 per cent of “stress”, and 33 per cent of backache (European Foundation 2001). And to many other diseases, even to life-threatening ones (WHO 2001a; Cooper 2005; Theorell et al. 2006).

Sustained work-related stress is an important determinant of depressive disor-
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Disorders. Such disorders are the fourth leading cause of the global disease burden. They are expected to rank second by 2020, behind ischaemic heart disease, but ahead of all other diseases (World Health Organization 2001b).

It is further likely that sustained work-related stress is an important determinant of the metabolic syndrome (Björntorp 2001; Folkow 2001, 2004; Theorell et al. 2006). This syndrome comprises a combination of: abdominal accumulation of adipose tissue; a decrease in cellular sensitivity to insulin; dyslipidemia (increase in LDL cholesterol and triglycerides, and decrease in HDL cholesterol); and hypertension, probably contributing to ischaemic heart disease and diabetes type 2 morbidity.

The most important pathogenic pathways from psycho-socio-economic determinants to ill health in Europe comprise:

- psycho-socio-economically induced physiological over-arousal,
- psycho-socio-economically induced pathogenic behaviours,
- pathogenic interpretation of environmental characteristics,
- pathogenic interpretation of proprioceptive signals (signals originating within the tissues of the body),
- pathogenic “patient’s delay”,
- psychosocial “avitaminosis”.

Complementary European occupational health initiatives

Over a decade ago, in 1993, the Belgian EU Presidency, the European Commission and the European Foundation jointly organized a major Conference on “Stress at work – a call for action”. The conference highlighted the increasing impact of stress on the quality of working life, employees’ health and company performance. Special attention was devoted to stress monitoring and prevention at company, national and European level. Instruments and policies for better stress prevention were presented and discussed. Finally, a round table on “Future perspectives on stress at work in the European Community” brought together representatives from national governments, the European Commission, UNICE, CEEP, ETUC and the Foundation.

Based on these deliberations, the European Commission created an ad hoc group to the Advisory Committee on Health and Safety on “Stress at work”. The ad hoc group proposed and the Advisory Committee endorsed (1997) the preparation by the Commission of a “Guidance” in this field.

Guidance on work related stress

This Guidance (European Commission 2000) emphasizes that, according to the EU Framework Directive, employers have a “duty to ensure the safety and health of workers in every aspect related to the work”. The Directive’s principles of prevention include “avoiding risks”, “combating the risks at source”, and “adapting the work to the individual”. In addition, the Directive indicates the employers’ duty to develop “a coherent overall prevention policy”. The Commission’s Guidance provides a solid basis for such endeavours.

Based on surveillance at individual workplaces and monitoring at national and regional levels, work-related stress should be prevented or counteracted by job redesign (e.g. by empowering the employees, and avoiding both over- and underload), by improving social support and by providing reasonable reward for the effort invested by workers, as integral parts of the overall management system, also for small and medium sized enterprises. And, of course, by adjusting occupational physical settings to the workers’ abilities, needs and reasonable expectations – all in line with the requirements of the EU Framework Directive and Article 152 of the Treaty of Amsterdam. Supporting actions should include not only research but also adjustments of curricula in business
schools, in schools of technology, medicine and behavioural and social sciences, and in the training and retraining of labour inspectors, occupational health officers, managers and supervisors, in line with such goals.

This overall approach was further endorsed in the Swedish EU Presidency conclusions (EU Commission 2001) according to which employment not only involves focusing on more jobs, but also on better jobs. Increased efforts should be made to promote a good working environment for all, including equal opportunities for the disabled, gender equality, good and flexible work organisation permitting better reconciliation of working and personal life, lifelong learning, health and safety at work, employee involvement and diversity in working life.

An obvious interlocking question is how? The answer to this question is considered in two relatively recent European documents, in addition to the European Commission’s (2000) “Guidance on Work-Related Stress” as summarized above, namely:

- the European Standard (EN ISO 10075-1 and 2) on Ergonomic Principles Related to Mental Work Load (European Committee for Standardization 2000); and

### European Standard on Mental Work Load

The International series of the Standard ISO 10075, Part 1 and 2 related to mental work load have been adopted and published as European Standards by CEN in July and March 2000. The CEN members are thereby giving this Standard the status of a national standard without any alteration.

This Standard defines mental stress as “the total of all assessable influences impinging upon a human being from external sources and affecting it mentally”.

*Mental strain* is correspondingly defined as “the immediate effect of mental stress within the individual (not the long-term effect) depending on his/her individual habitual and actual preconditions, including individual coping styles”. The Standard lists some “facilitating” and “impairing” (short-term) effects of mental strain. The former include “warming-up effects” and “activation”, whereas the latter comprise “mental fatigue”, and “fatigue-like states” such as “monotony”, “reduced vigilance” and “mental satiation”.

According to the Standard, the consequences of mental strain also include other consequences, e.g. boredom and feelings of being overloaded, which are, however, not dealt with in the Standard, “due to large individual variation, or to as yet inconclusive results of research”. The same is said to apply to “possibly unfavourable long-term effects of repeated exposure to mental strain being either too high or too low”.

In its “general design principles”, the Standard emphasizes the need to fit the work system to the user, and in doing this, to utilize his or her experiences and competences, e.g. by using methods of participation. These principles should be applied in order to influence (a) the intensity of the workload, and (b) the duration of the exposure to the workload. Personal factors, like abilities, performance capacities, and motivation will influence the resulting workload. Accordingly, the work system design starts with a function analysis of the system, followed by function allocation among operators and machines, and task analysis, and results in task design and allocation to the operator.

The Standard points out that mental workload is not a one-dimensional concept but has different qualitative aspects leading to different qualitative effects. The Standard provides guidelines concerning fatigue, monotony, reduced vigilance, and satiation. It presents, in considerable detail, their determinants and exemplifies the latter.
Corporate Social Responsibility Europe

The European Round Table of Industrialists (ERT 2002), commenting on the European Commission’s (2001a) Green Paper on Corporate Social Responsibility, concludes that healthy, profitable, forward-thinking companies have a key contribution to make to the Lisbon goal of Europe becoming the “most competitive and dynamic knowledge-based economy in the world” by 2010. Such companies have recognised that, in order to operate successfully, they must satisfy the three elements of sustainable development: financial, environmental and social. According to ERT, this is the essence of what might most accurately be referred to as responsible corporate conduct, rather than “Corporate Social Responsibility”, the term used by the European Commission. Failure to satisfy the three elements would lead, over time, to terminal weakness, in terms of credibility and trust amongst stakeholders and internal organisational resources. Recognition of and respect for corporate social responsibility are therefore key to any business interested in building a healthy future for its employees, shareholders and stakeholders in general (ERT 2002).

According to the European Commission’s Green Paper (2001), the CSR concept implies that a company conducts its business in a socially acceptable way and that it is accountable for its effects on all relevant stakeholders. Thus, CSR raises the question of the total impact of an activity on the lives of individuals both within, and external to, the company:

Within: recruitment and employee retention, wages and benefits, investment in training, working environment, health and safety, labour rights …

Externally: human rights, fair trading, impact on human health and quality of life, acceptable balance of benefits and disbenefits for those most affected, sustainable development …

According to this Green Paper, the strategy’s basic message is that long term economic growth, social cohesion and environmental protection must go hand in hand. This has numerous implications for companies’ relations with their employees. It involves a commitment to aspects such as health and safety, a better balance between work, family and leisure, lifelong learning, greater workforce diversity, gender-blind pay and career prospects, profit-sharing and share ownership schemes. These practices can have a direct impact on profits through increased productivity, lower staff turnover, greater amenability to change, more innovation, and better, more reliable output. Indeed, a major thread throughout the paper is that companies often have an interest in going beyond minimum legal prescriptions in their relations with their stakeholders. Peer respect and a good name as employer and firm are highly marketable assets.

A number of other initiatives support the promotion of CSR at the global level, such as the UN Global Compact, the ILO’s Tripartite Declaration on Multinational Enterprises and Social Policy, and the OECD Guidelines for Multinational Enterprises. While these initiatives are not legally binding codes of conduct for companies, they benefit in the case of the OECD guidelines from the commitment of adhering governments to promote the actual observance of the guidelines by business.

Based on such considerations, companies could publish annual “triple bottom line” – reports, addressing financial, environmental and social (including health) issues.

In preparing such a bottom line, they could consider the Social Index (0–100 points) – a self-assessment tool developed by the Danish Ministry of Social Affairs et al. (2000) for measuring the degree to which a company lives up to its social responsibilities.
A comparison between the three approaches

The stress-stressor-strain concepts

The European Standard defines “mental stress” as a stimulus – generally in line with the corresponding definition in physics, as “a force that tends to strain or deform a body”. The Guidance has chosen the current psychosociobiological stress concept originally introduced by Selye (1936), comprising the common denominators in an organism’s adaptational reaction pattern to a variety of influences and demands. According to the European Standard, stress (= the stimulus) induces “mental strain” (= the reaction). The non-specific aspects of the latter are what the Guidance refers to as “stress”. The European Standard’s “stress” concept equals the Guidance’s concept of “stressor”. It is, of course, important to keep in mind this fundamental difference between the two sets of definitions, to avoid confusion.

Negative, positive, or neutral connotations

The European Standard emphasizes that its stress concept is regarded as neither intrinsically negative nor positive. Depending on the context it can be both or neither. Similarly, the Guidance indicates that stress can be positive (“the spice of life”) or negative (“a kiss of death”), depending on the context and on interindividual variation.

Unfavourable long-term effects?

The European Standard excludes consideration of possible negative long-term effects because of “the yet inconclusive results of research”. The Guidance, prepared almost a decade later, takes the opposite view and presents evidence of a wide variety of negative (health) effects of long-term stressor exposures. The latter evaluation is also in line with the World Health Organization’s formulation that “mental health problems and stress-related disorders are the biggest overall cause of early death in Europe”.

Different paradigms

As can be easily seen, these three approaches are based on different but related paradigms. The European Commission’s Guidance has its roots in workers’ protection, stress medicine and social psychology, and in an ecological or systems approach. The European Standard is based on ergonomics – an applied science of equipment and work process design intended to maximize productivity by reducing operator fatigue and discomfort. And CSR has as its basic core a consideration for ethics and human rights.

The Guidance was prepared with the awareness that “one size does not fit all”. It is a hors-d’oeuvre, a smorgasbord, from which all stakeholders are invited to choose the combination of interventions considered to be optimal in their specific setting, for subsequent evaluation.

It is chimed to the European Framework Directive and aims at preventing work-related ill health and promoting wellbeing and productivity.

The Standard is more precise in its indications of what to include and what to promote and how. It refers to all kinds of human work activity with the explicit aim to “fit the work system to the user”. It never says so but leaves the reader with the impression that productivity (rather than health and wellbeing) should be considered as the primary outcome.

On many points, the Guidance and the Standard overlap, both in terms of objectives and with regard to means, by which these objectives should be achieved. The CSR initiative constitutes a much broader approach, comprising employee health, wellbeing and productivity, as well as economic and ecological sustainable development.
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Swedish implementations

In early 2003, the Swedish Government presented its Public Health Objectives Bill (2002/03:35), which was subsequently approved by the Swedish Parliament (Riksdag).

It is based on an intersectoral structure approach, comprising eleven goal areas, to promote coherence in public health work. The following eleven goal “areas” have been established:

- Participation and influence in society,
- Economic and social security,
- Secure and favourable conditions during childhood and adolescence,
- Healthier working life,
- Healthy and safe environments and products,
- Health and medical care that more actively promotes good health,
- Effective protection against communicable diseases,
- Safe sexuality and good reproductive health,
- Increased physical activity,
- Better eating habits and safer food,
- Reduced use of tobacco and alcohol, a society free from illicit drugs and doping and a reduction in the harmful effects of excessive gambling.

These eleven objective “areas” for public health have been chosen because there is scientific evidence suggesting that a lack of primarily social measures in these areas may cause ill-health. These areas also incorporate health determinants that can either promote good health or lead to ill-health. The preferred focus of the Government, therefore, is for measures to achieve the overall public health aim not just to be implemented in the policy area of public health as it is defined in government instructions to authorities. Over the next few years, important measures to improve public health will also be implemented in policy areas such as social affairs, gender equality, healthcare, labour market and working life, housing, educa-

Although attempts have been made to instrumentalize the CSR concept by providing quantitative and qualitative measures of targets, interventions and outcomes (Danish Ministry of Social Affairs 2000), there is a considerable risk of some stakeholders paying lip service to CSR without taking any or more than token action.

Even so, all three initiatives constitute important bases for tripartite collaboration for the promotion of high productivity, high occupational and public health and high quality of life. There is now an urgent need to

- disseminate available knowledge,
- integrate it into occupational and public health promotion policies, and
- implement the policies and evaluate their outcomes.

This view is based, in part, on the Conclusions adapted by the European Council of Health Ministers in Brussels on November 15, 2001, according to which the Council

- recognises that stress and depression related problems (...) are of major importance to all age groups and are significant contributors to the burden of disease and the loss of quality of life within the European Union;
- underlines that stress and depression related problems are common, cause human suffering and disability, increase the risk of social exclusion, increase mortality, and have negative implications for national economies;
- recognises that, while there are effective methods to prevent stress and depression related problems, there is a need to further develop research and methods for intervention (Cooper 2005);
- recognises the importance of promoting mental health through actions across all policies and activities (European Foundation 1994);
- invites Member States to give special attention to the increasing problem of work-related stress and depression.
tion, the environment and culture, as well as in policies for children, the disabled and the elderly.

Long-term, goal-oriented and intersectoral efforts within all sectors exerting a crucial influence on the development of public health will be required to achieve the overall public health aim. This in turn necessitates better coordination on all levels with the aim of attaining greater efficiency and better knowledge as to the overall effect of the various measures on public health.

13 key issues

No governmental bill in a field as broad as this can be truly specific. To approach a necessary degree of specificity, the British Department of Health and the National Health Service (2004) have invited all stakeholders to a consultation on action to improve people’s health, based, in part, on the recent Wanless Report (2004).

The consultation formulates 13 issues aimed at individuals, communities, organisations, public health professionals, universities and the NHS. They concern:

- what you eat and how you spend your time at home, school, work, leisure make a difference to your health;
- everyone should be able to make their own choices;
- people in some groups and areas experience health that is worse than the average, including some people in black and minority ethnic groups, and people living in disadvantaged areas;
- one person’s choice may spoil the chances of good health for others;
- the role of regulation;
- working together to support healthy choices;
- organisations have an impact on health through their interactions with the public, employees and society;
- creating and maintaining a healthy environment;
- helping people deal with the stresses of life;
- evidence base;
- disseminating information;
- ensuring change happens.

Conclusion

The issues and challenges raised here for public and occupational health promotion in Sweden, the United Kingdom and in other parts of Europe apply also to the world at large, both developed and developing. In a civilized society, quality of life issues like hours of work, family time, some sense of job security and control over work and one’s life, should be part of our way of life. As the social anthropologist Studes Terkel suggested in his acclaimed book *Working*: “Work is about a search for daily meaning as well as daily bread, for recognition as well as cash, for astonishment rather than torpor, in short, for a sort of life rather, than a Monday through Friday sort of dying”.

References


Theorell T et al., 2006, Stress and Cardiovascular Disease. European Heart Network, Brussels.


World Health Organization, 2001a, Mental Health in Europe. WHO, Copenhagen.