introduction

Work itself and work conditions have changed rapidly during the latter part of the 20th century. Many traditional forms of production, work procedures and tasks have vanished while many new ones have been introduced and developed further. As a result, the spectrum of work-related morbidity has changed drastically.

In an eve-of-millennium editorial[1], Professor Sven Hernberg wrote in general terms: "In the developed world, many chemical and physical occupational hazards have been controlled, with the result that many classical occupational diseases have almost disappeared or at least become milder. Long-term non-specific effects, such as cancer and adverse pregnancy outcome, have certainly existed for a long time, but modern epidemiological research has been able to link some of them to the work environment, the first requirement for successful prevention. General morbidity, such as cardiovascular diseases, allergies, musculoskeletal disorders, as well as mental ill health, has also been shown to be work-related in many instances. These categories of morbidity have substituted clinical occupational diseases as the number one problem in occupational health. Especially psychosocial problems and their health effects have received much attention lately".

This description certainly holds true also for Sweden. Furthermore, during the 1980s and the early 1990s the labour market in Sweden underwent major, interlinked changes, partly related to the globalisation of the economy. A rapid and drastic increase in the unemployment rate resulted from the continued rationalisation of heavy industry, deep cuts in the public sector and substantial immigration. Employment and training for new jobs became the prime issue for labour market policy. Part-time and temporary jobs, as well as "self employment" and overtime increased, with adverse health effects[2]. Women achieved roughly the same employment rate as men during the 80s, and pay and position gaps highlighted gender issues. The costs of sick-leave, early retirement, and worker's compensation increased dramatically when people with drawbacks like reaching older ages, ceased to be as attractive as they had been during the 1980s.

There was also disappointment with the fact that early retirements and exits from the labour market increased rather than decreased in spite of the major expansion of occupational safety and health resources during the 70s and 80s. New approaches to prevention were required, with a greater focus on the integration of work environment management with planning, work organisation and production management.

Developments during the 90s had certainly not made occupational safety and health research into chemical, physical and ergonomic factors unnecessary, but it became clear that additional new questions had to be asked, like :

- How can work environment aspects be integrated into companies' and organizations' development processes ?
- What health effects do short- and long-term unemployment, or non-permanent employment, have on different groups, ages and sectors ?
- What health effects may different work schedules have, and how will they affect tiredness, recovery and sleep quality ?

[1] Hernberg S. Editorial. Towards a new millennium. *Scand J Work Environ Health* 25:465-469, 1999.

[2] Isaksson K, Hogstedt C, Eriksson C, Theorell T (eds). *Health Effects of the New Labour Market.* New York, Kluwer Academic/Plenum Publishers, 2000.

What knowledge and research is needed for healthy work in the New Century ?

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- What are the combined health effects of work environment, living conditions and lifestyle factors ?
- How much of the increasing health inequity can be explained by work-related factors ?
- How does the work environment influence ageing ?
- Which types of work organisation support, and conversely threaten, sustainable work ability ?
- What obstructs preventive measures to create a safe work environment when the necessary knowledge is available ?
- What remit and organisation should occupational health services have with the growing prevalence of temporary and multiple work places ?
- Are laws, internal control, quality control or "continuous improvement" the best procedures for work environment management ?
- How are health and health behaviour affected by different social insurance and workers compensation systems ?
- What savings does a good or bad work environment achieve for business and for society ?

The Swedish research agenda

Those changes and knowledge needs in the society have influenced the working life research agenda in Sweden. In 1995, a new research institute was created under the Ministry of Labour, called The National Institute for Working Life. This new institute was formed from the merger of the former National Institute of Occupational Health, NIOH, some parts of the Work Environment Fund and a smaller institute, known as The Working Life Center, WLC.

The NIOH had mainly researched into traditional occupational safety and health fields, although including ergonomics and the psycho-social issues, with a staff of 300. The WLC had about 75 staff studying industrial relations, work organisation and gender issues, learning at the workplace and labour development processes.

The new institute's remit was to examine Swedish labour market policy, and how labour market conditions and opportunities have changed since Sweden joined the European Union (EU). Work organisation and marginalisation of groups on the Swedish labour market were included in the Institute's broadened terms of reference. Occupational health remained the priority area, but it was clearly parliament and government's intention to shift resources towards labour market and work organisation research, but also to promote multilevel and multidisciplinary research.

The Institute has now a staff of over 500, including 35 full professors, 35 associate professors, another 100 post-doctoral researchers and 140 doctoral students tutored by Institute researchers (70 of whom are employed at the Institute). Most are situated in and around Stockholm, and 90 people are employed at a regional institute in Umeå, northern Sweden. A further four regional institutes opened in 1999 have 10 - 20 employees to date, but are expected to expand to 20 - 30 staff each. The institute has a research, development and training budget of 40 million euros for 2001. The institute runs what is known as the SALTSA program for research on working life issues from a European perspective and in the interests of the employees together with the three Swedish trade union confederations.

Concluding remarks

The shift in direction for the NIWL has meant new resources for labour market and regional development research as well as some multidisciplinary programmes for work organisation research issues. Ergonomics and musculoskeletal disorders have been prioritised. The new regional institutes will facilitate the integration between research and various development projects. The large number of positions for doctoral students will provide an excellent basis for future recruitment of working life researchers.

Research findings, and the researchers themselves, now have a much higher media profile in Sweden. Their appearances have probably quadrupled between 1995 and 1999 due to increased relevance and expertise in contemporary issues, e.g. stress, new forms of labour contracts, call centres, electromagnetic fields, computer ergonomics and skin disorders.

A comprehensive assessment of how successful the integration between the former institutes has been remains to be made. It will embrace the quality of research, but also political priorities, the need for independent knowledge in the different areas and the Institute's ability to deliver the right knowledge at the right time.

There is a danger of resources being drained away from work-related health issues towards the new focus on other areas in working life research. So extra resources must be found within the public health research sector if occupational health research, including work environment management, is not lose out.

Other occupational health institutes, particularly the Finnish Institute of Occupational Health[3], have also broadened their research scope to include work organisation issues, work ability and the health effects of labour market changes as discussed in the recent workshop on "Strategies for Occupational Health Research in a Changing Europe"[4]. However, the Swedish institute seems to have the widest span of research areas from molecular biology to labour law and research on regional development process. The strategy workshop concluded that :

- Occupational health research is a basic tool to achieve healthy work for all.
- Healthy work embraces a vision on a healthy work environment, healthy organisations and conditions which promote health and development for the individual worker.
- Occupational health research addresses the social issues of healthy work, and so is a field of social science and public health science research.
- The role of occupational health research institutions is to produce action-relevant scientific knowledge, and to implement knowledge that creates healthy work for all.
- Occupational health research institutions are centres of scientific excellence and centres for the education of research staff and occupational health practitioners.
- Occupational health research institutions should collaborate between themselves and with private and public stakeholders to pursue practicable and cost-efficient research.
- Occupational health research institutions must develop communication skills in dealing with a multiplicity of stakeholders with a view to implementing scientific knowledge in practical workplace interventions.
- Occupational health research institutes must pay particular attention to vulnerable groups and to negative developments in terms of work-related health and quality of life.
- The European Union should allocate discrete funds for European occupational health research and research co-operation.

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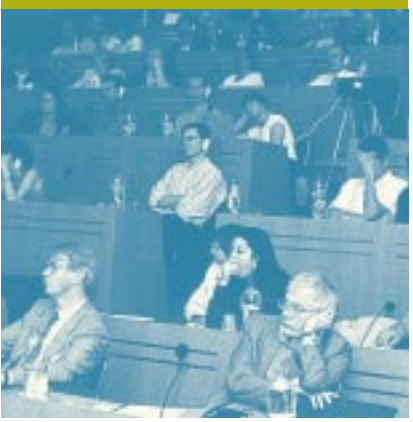

[3] Rantanen J. Research challenges arising from changes in worklife. *Scand J Work Environ Health* 25:473-483, 1999.

[4] Westerholm P, Marklund S (eds), *Strategies for Occupational Health Research in a Changing Europe.* Stockholm, National Institute for Working Life, 2000:12.