European Foundation for the Improvement of Living and Working Conditions

Positive trends in working conditions and occupational health

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This report summarises the findings of 'Faktaboken om arbeidsmiljø og helse 2011' [Factbook on working and health 2011], which presents updated statistics on the Norwegian working environment and identifies trends in work-related health problems by gender, age and occupational and industry groups. The data, based on responses from a representative sample of more than 24,000 workers, show that Norwegian working conditions and occupational health continue to improve. Most people have favourable working conditions and are in good health, and nine out of ten respondents say they are satisfied with their jobs. However, there are still challenges in some sectors in order to ensure a safe and healthy working environment that promotes motivation, good health and work satisfaction for everyone.

Introduction

This survey data report discusses the following trends in working conditions and health.

- Working hours, including the effects of flexible working hours, working during non-standard hours, and work –life balance.
- Psychosocial factors, such as job security and satisfaction, job demands and autonomy, reward and recognition, social relations, bullying, harassment and workplace violence.
- Exposure to ergonomic work factors, such as heavy physical work, uncomfortable postures, and repetitive movements;
- Exposure to physical factors, such as heat, noise, insufficient light, and vibration;
- Exposure to chemical and biological factors;
- General health and health-related drop-out from employment (health, absenteeism, work disability).

The data in this report mainly derive from the Level of Living Survey, Working Conditions Surveys (LKU), carried out in 2009. In addition, data from StatBank Norway (Statistics Norway, SSB), the Labour Force Survey (AKU), the Norwegian Labour and Welfare Administration (NAV), the Product Registry (Produktregisteret) and the exposure database EXPO, was used. Details about methodology are available in the Appendix at the end of this report.

Trends in working conditions

The previous survey data report (**NO0711019D**) showed that working conditions in the 2003–2006 period continued to improve, and that the levels of exposure to physical risk factors were generally low. The report also revealed that Norwegian workers had a high level of job demands and job control, and good opportunities for professional development.

This report explores whether this positive trend has continued beyond 2006. It discusses the change in working conditions and health outcomes, with a special focus on identifying vulnerable groups where the potential for prevention and improvement of the working environment is greatest.

Psychosocial and organisational working environment

In general, Norwegian employees draw a positive picture of conditions when they are asked general questions about satisfaction and motivation for their jobs. Most people find opportunities for using skills, knowledge and experience in their jobs, and most employees report they they have support from colleagues and leaders. At the same time, a number of challenges in the area of high job demands are presented, as well as issues such as little control over one's personal work situation, long working weeks, shifts, rotations and night-work in certain professions. Such challenges occur particularly in the health care sector, in education and in various types of service occupations.

Working hours and work–life balance

The Norwegian working population has on average one of the shortest working weeks in Europe, largely due to the high proportion of the labour force working part time. Since 1972, the average hours worked per week has dropped by six hours, from 44 to 38. Of the total working population, approximately seven out of ten work full-time and about 70% report working within the 12 hours between 6am and 6pm. In 2009, 41% of working women and 13% of all working men worked part-time.

In all, 17% of all employees, or nearly 400,000 people are working long working weeks (45 hours or more per week). Just under half of these workers say that this is time compensated for in the form of time off in lieu or overtime pay. Long working weeks (more than 45 hours per week) are more common among men (18% against 6% for women), and the length of the working week increases with the length of a worker's education. Norway has a higher proportion of shift and rotation workers than many other countries. In 2008, a total of 545,000 or little more than 23% reported working in shifts or rotation, compared to about 20% in 2001 (Figure1). The largest increase is seen in the health care industry and trade. Over the same period, the proportion reporting night work remained relatively stable at around 16% (AKU). However, the proportion who reported regular night work fell slightly, from 5.1% in 2001 to 3.9% in 2009. This means that about 91,000 people reported regular night work in 2009.

Figure 1: Trends in working time arrangements (%)

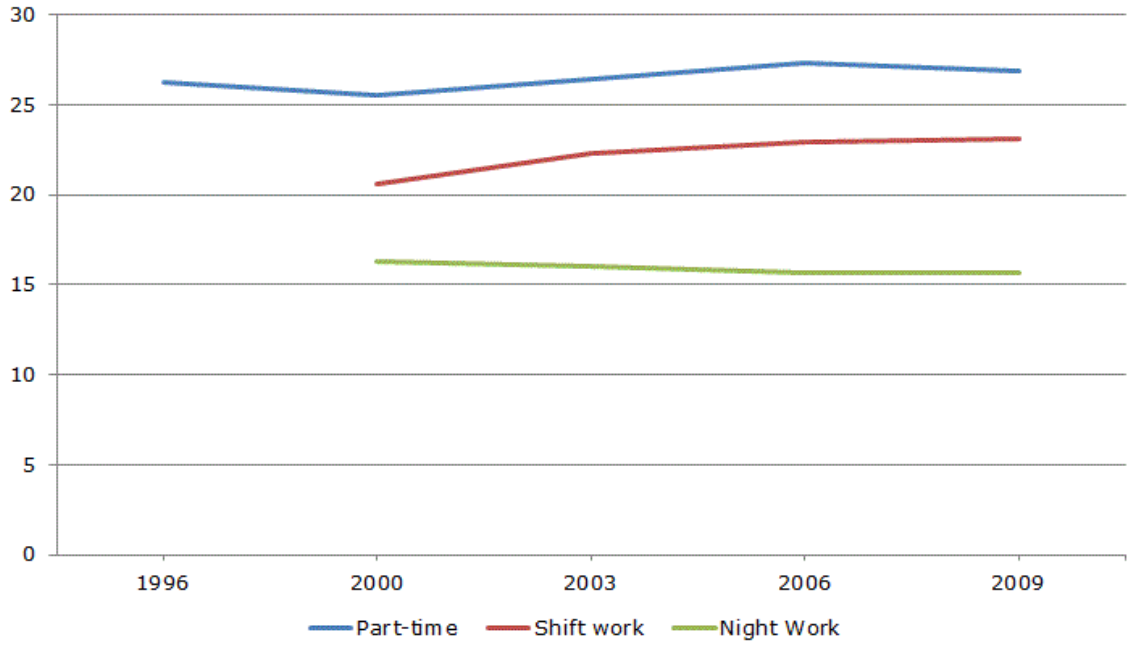

Figure 1: Trends in working time arrangements

Source: Labour Force Survey (AKU)

Working time affects both the time and the capacity we have to cope with the duties and expectations of our personal lives. Figures from LKU 2009 show that 14% or workers feel that job demands affect their private life fairly often or very often. This means that about 340,000 economically active persons often experience this problem. If those who occasionally experience this problem are included, the proportion rises to 38%. The problem is more prevalent in occupations characterised by long working weeks and working hours that are not easy to reconcile with home and family life. The problem also occurs to a much lesser extent in a number of female-dominated occupations characterised by part-time work. It is more common for the

requirements of work to affect the private lives of those who work in a privately owned company (19%) and least common in the public sector (11%).

Restructuring and job security

In all, 28%, or nearly 700,000 people, reported that workplace reorganisations had affected their own work during the period 2006–2009. The corresponding figure for 2006 was 775,000, the same level as for 2003. One in three Norwegian employees reported personal experience of job cuts during the period 2006–2009, and nearly 450,000 people experienced reductions in their own department. In all, 54% reported having had to learn how to use or deal with new technology or new administrative systems during the past year. One in three reported lack of sufficient training.

Figure 2: Job security, temporary job contracts and work contracts (%)

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Source: Stat Bank Norway (SSB)

In a European context, Norwegian workers are also among those least likely to report the fear of losing their job. There is no general trend towards more or less job security in Norway, and about 10% reported job insecurity in 2009. The use of temporary employment contracts has also been relatively stable during the last decade.

Job demands and job autonomy

Norwegian workers report relatively high job demands, but also experience a relatively high degree of autonomy in their job. According to LKU 2009, 61% of the Norwegian working population reports working at a high pace fairly or very often. High work pace is most often experienced by service personnel (hotel/restaurant), doctors and dental assistants, pharmacy technicians, nurses and operators/craftspeople in food production. The latter group of workers differs from the rest in that their workpace is more closely linked to production requirements and speed of machines than to the needs of customers and clients. Nearly two out of three said that they could, to a high degree, decide how to carry out their tasks, and half of all workers reported

being able to influence decisions that are important for their own work. There are pronounced differences in job autonomy between educational groups.

Figure 3: Low levels of job autonomy by educational level, all workers (%)

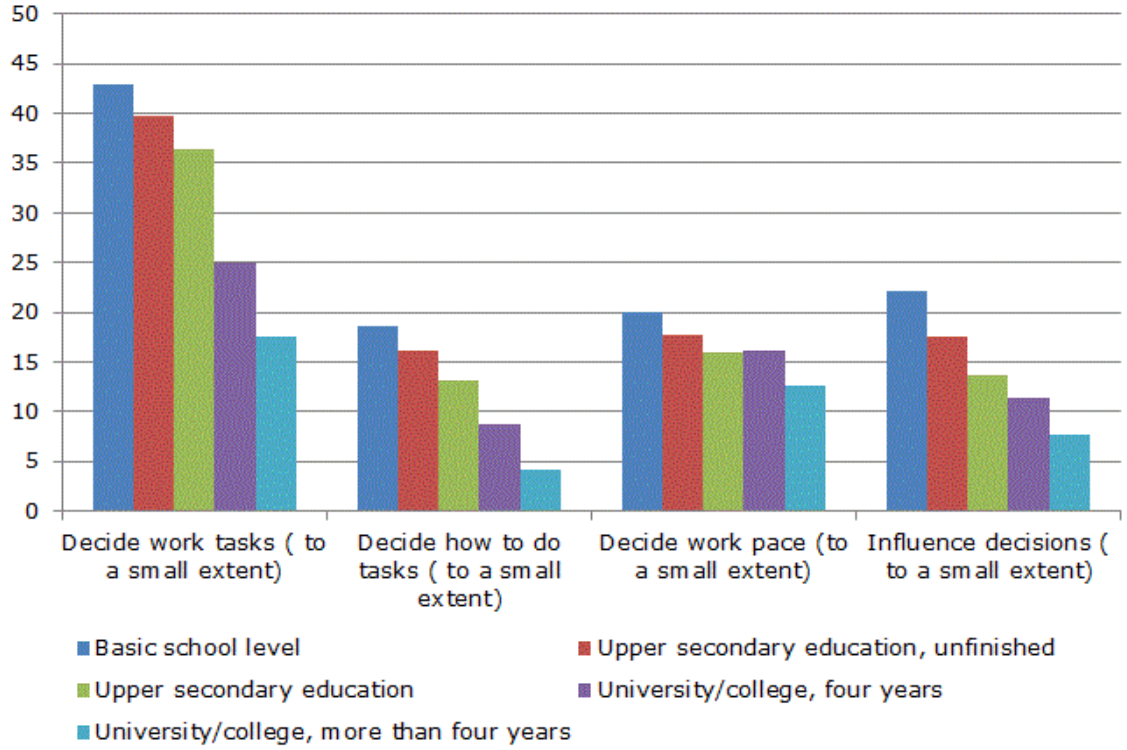

Figure 3: Low levels of job autonomy by educational level, all workers (%)

Source: SSB, Level of Living Survey: Working Conditions, 2009.

Social relations at work

Most employees in Norway report support from their manager in terms of feedback on their work performance and support and help in the execution of their work, and say they believe that their work is valued by their superiors and colleagues. Certain occupational groups stand out with a much lower average score, such as operators/craftspeople in food processing, cleaning, lecturers or teachers with a university education, and bus and rail drivers. Nearly one in three reports that they sometimes or often experience poor relationships between staff and management, and 24% report poor relationships between staff. A lower proportion, approximately one out of ten, reported unpleasant conflicts with management.

Bullying, sexual harassment and violence

The extent of bullying and teasing (harassment) from colleagues in Norwegian working life seems to have been relatively stable for the past ten years, and approximately 2% of the working population is exposed to it. About 2% experienced bullying from their nearest manager in 2009, and bullying seems to be fairly evenly distributed throughout the various groups. In all, 3.4% report that they are exposed to unwanted sexual attention once a month or more. Service personnel (hotels and restaurants) are particularly vulnerable to sexual harassment at their workplace. Other vulnerable groups include health care workers, nurses and physiotherapists. In 2009, just over 6% of workers reported having been exposed to violence or threats of workplace

violence. The highest incidence is found among social workers and social educators, but it is also a significant problem for health care workers and nurses.

Mechanical working environment

Manual handling of objects, poor posture, repetitive movements and heavy physical work are examples of mechanical work exposures that occur in a variety of jobs. In the last 10–15 years there has been a moderate but steady decline in the proportion of economically active people reporting mechanical exposure at work, although one exception is the category of repeated and unilateral arm and hand movements and other repetitive tasks. Here there has been a slight increase since 2006.

Figure 4: Trends in mechanical exposure at work, 1989–2009 (%)

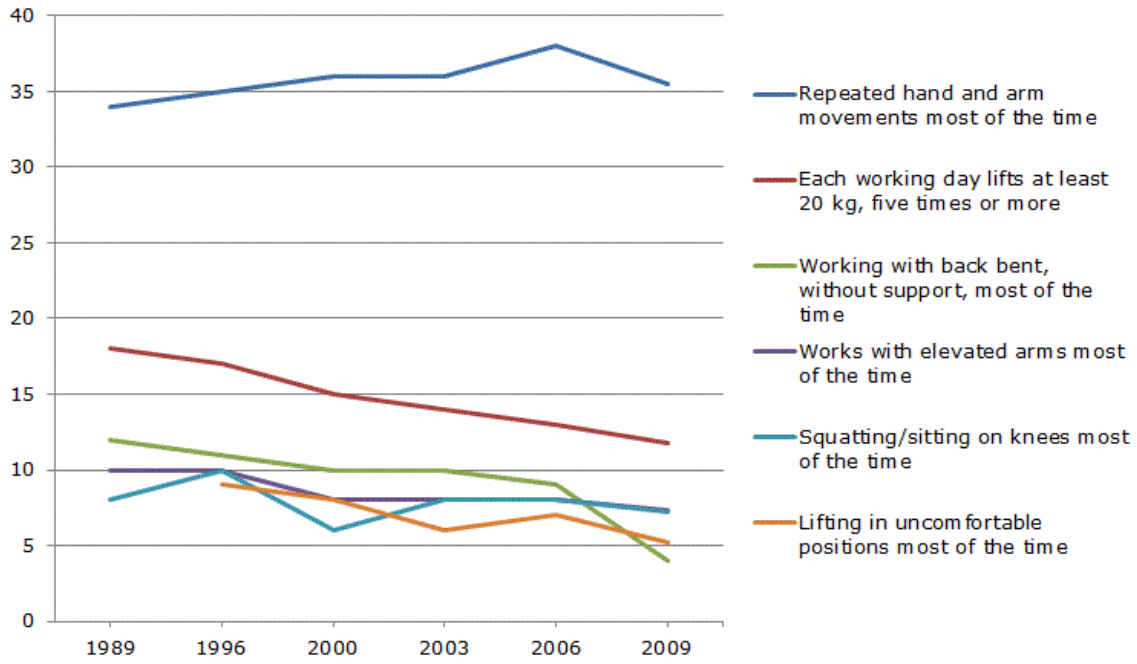

Figure 4: Trends in mechanical exposure at work, 1989–2009 (%)

Source: Stat Bank Norway (SSB)

The combination of lifting and carrying heavy loads and working in forward flexion is shown to create a significantly higher risk of sick leave due to lower back pain, compared to workers who had little physical exposure. A number of occupations stand out as scoring relatively highly on five or six of the eight measured exposure factors:

- carpentry and woodworking;
- hairdressing;
- plumbing, construction crafts, mechanics;
- welders and sheet metal workers;
- road cleaning and road-construction workers;
- stone and masonry workers.

Similarly, service personnel in the hotel and restaurant sector reported relatively high exposure for four mechanical dimensions.

Several other occupations reported a relatively high incidence of three mechanical dimensions:

- electricians and electrical fitters;
- telecommunications technicians;
- medical and dental secretaries;
- pharmacy technicians;
- nursing and care workers.

Physical working environment

Loud noise, indoor air quality, vibration, adverse temperatures, light and radiation are examples of physical environmental factors that may affect the individual's health, safety and well-being. In general, data shows that adverse physical exposure to such factors in the workplace has become somewhat less prevalent over the past 15 years (Figure 8), but although the total exposure to loud noise has been significantly reduced in recent years, noise is still a problem in many industries and professions.

The highest occurrence of high noise levels are found among operators and artisans in the food industry and among process operators in industry and in the oil and gas sectors, and 40% of the workers in these areas are at risk. A further 20% of employees working with children and youths, preschool teachers and service personnel in hotels and restaurantsare exposed to high noise levels. There are large gender differences for a number of exposures. While men are most susceptible to high noise levels, cold and harsh lighting and whole body, arm and hand vibration, women are more likely than men to say that they are exposed to poor indoor air quality. A general pattern for several of the physical work environment factors is that more young workers report exposure than older ones. However, because many young people remain in full-time education until the age of 25, there are fewer individuals with administrative and academic qualifications among those under 25 who are economically active, and a correspondingly higher proportion of them are performing manual work.

Figure 5: Trends in physical workplace exposure, 1989–2009 (%)

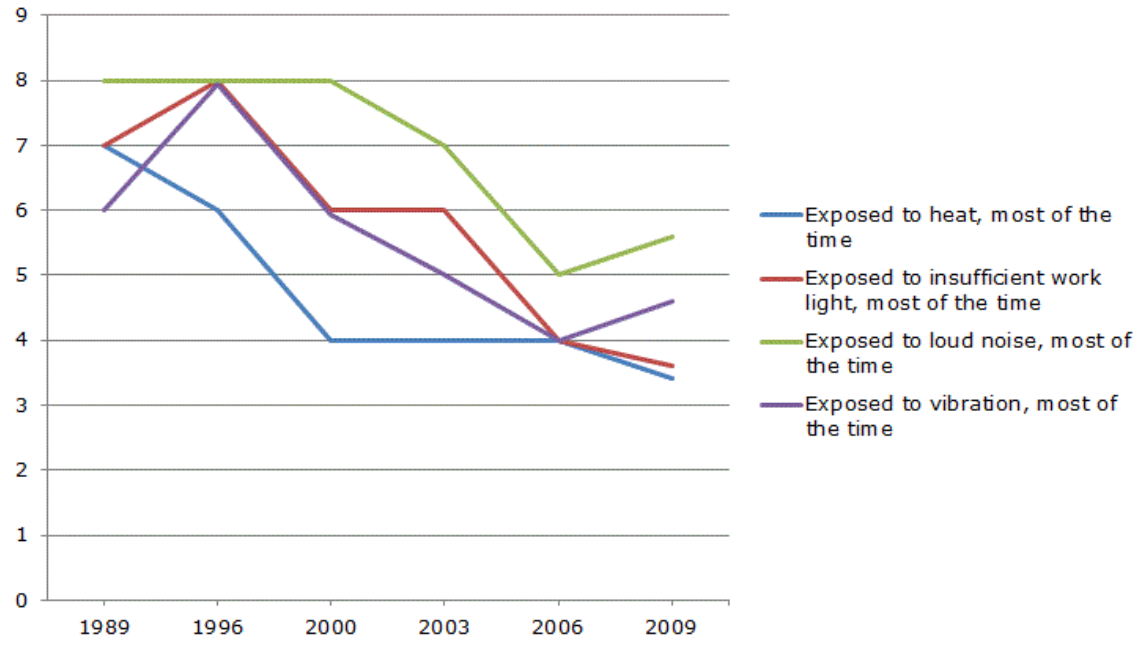

Figure 5: Trends in physical workplace exposure trends, 1989–2009 (%)

Source: Stat Bank Norway (SSB)

Chemical and biological working environment

Better knowledge about chemical exposure, technological developments in the industry and regulation of the labour market has reduced harmful chemical exposure substantially in typical industrial occupations. Nevertheless, there are still a significant number of workers who develop occupational diseases due to chemical exposure.

However, providing a comprehensive national overview of the extent of chemical exposure in the Norwegian labour market and its possible health effects is very challenging. The main data sources for this kind of information in Norway are the exposure database EXPO at the National Institute of Occupational Health (STAMI), the Level of Living Survey – Working environment under the auspices of Statistics Norway and the State Central Register of Chemicals (Klif). In the petroleum sector in which large amounts of chemicals are used, the annual report, Risk Levels in the Norwegian Petroleum Industry Report (RNNP), details its activities.

The general trend for the Norwegian labour force is that exposure to chemicals has gradually become less common. The exception is in the proportion of the workforce reporting exposure to irritating substances, which has increased since 2003.

Data from EXPO show that chemical exposure has decreased in Norwegian workplaces, and data from the Product Register show that the amounts of hazardous chemicals in general have decreased.

Even so, some groups are particularly vulnerable to chemical exposure, especially in the construction industry and in the petroleum sector.

Measured both by number and quantity, the building and construction sector has a significant use of danger-labeled chemicals. Use of allergy-labelled chemicals is particularlywidespread, as is use of CMR-labelled chemicals. Self-reported data show that employees in this industry have a high incidence of chemical exposure through the airways in the form of metal and mineral dust.

The petroleum and coal products industry has relatively few employees based on figures from the AKU 2009, and the number of respondents in living data is therefore low. However, this industry has the greatest amount of danger-labelled substances in circulation – particularly CMR-labelled chemicals.

Figure 6: Self-reported chemical exposure trends, all workers, 1989–2009 (%)

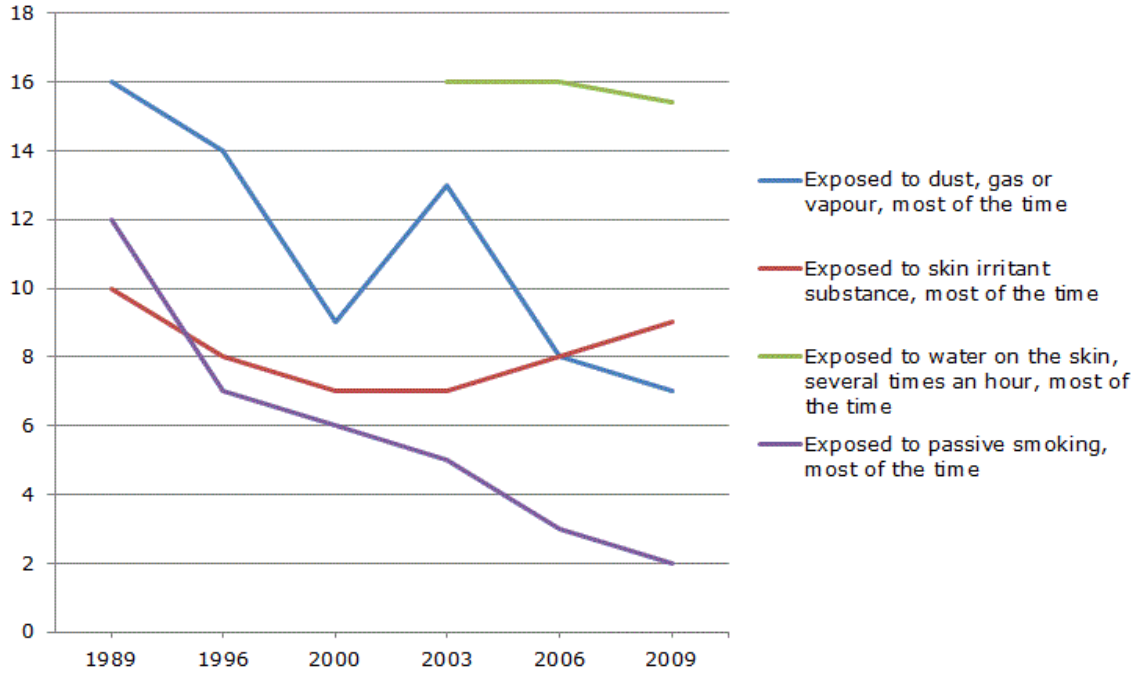

Figure 6: Self-reported chemical exposure trends, all workers, 1989–2009 (%)

Source: Stat Bank Norway (SSB)

Over recent decades an increasing number of workers in new industries are subjected to biological material, such as waste disposal and composting of food waste. Consequently there is a need for more knowledge about the biological risk factors in the work environment and the use of biological materials in new industrial technology, as well as in traditional occupations. In the 2009 survey of living conditions, questions were asked about biological environment for the first time.

In all, 13% of all employees reported that they handle body fluids, living or dead animals, laboratory materials or organic waste for 25% or more of their working hours. In the European Working Conditions Survey in 2010, 13% of the Norwegian employees surveyed answered that they were exposed to biological material at work, compared to the EU average of 11%. One explanation may be that relatively more people are employed in the health care sector in Norway.

Work, health and sickness absence

Health is an important factor in determining an individual's capacity to work, but the interaction between working capacity and job demands also have an impact on employability. Sick leave and retirement from working life can be the result of reduced working capacity due to illness and health problems, but can also be the result of new and increased work demands on individuals whose work capacity cannot increase. There are many factors at work that may affect both health and health problems which are actually leading to absence.

Self-reported health

Data from LKU 2009 (SSB) show that self-reported work-related health problems in the general working population were as prevalent in 2009 as they were 10–15 years ago. Musculoskeletal disorders are by far the most common problems, and occur more among women than among men.

Pain in the neck, shoulders or upper back are the most frequent musculoskeletal disorders, and two out of five workers experience them on a monthly basis. Pain in the lumbar region or lower back, and pains in the hips, legs and feet are also common. Between 40% and 60% of respondents reporting musculoskeletal pain believe that the pain is related to their current work. About one in ten report having experienced symptoms of nervousness, anxiety, restlessness or depression within the last month. About half of these believe that the problem is related to their current work. The relationship between gender and educational differences and such complaints are not significant.

Figure 7: Trends in health problems and work, 1996–2009 (%)*

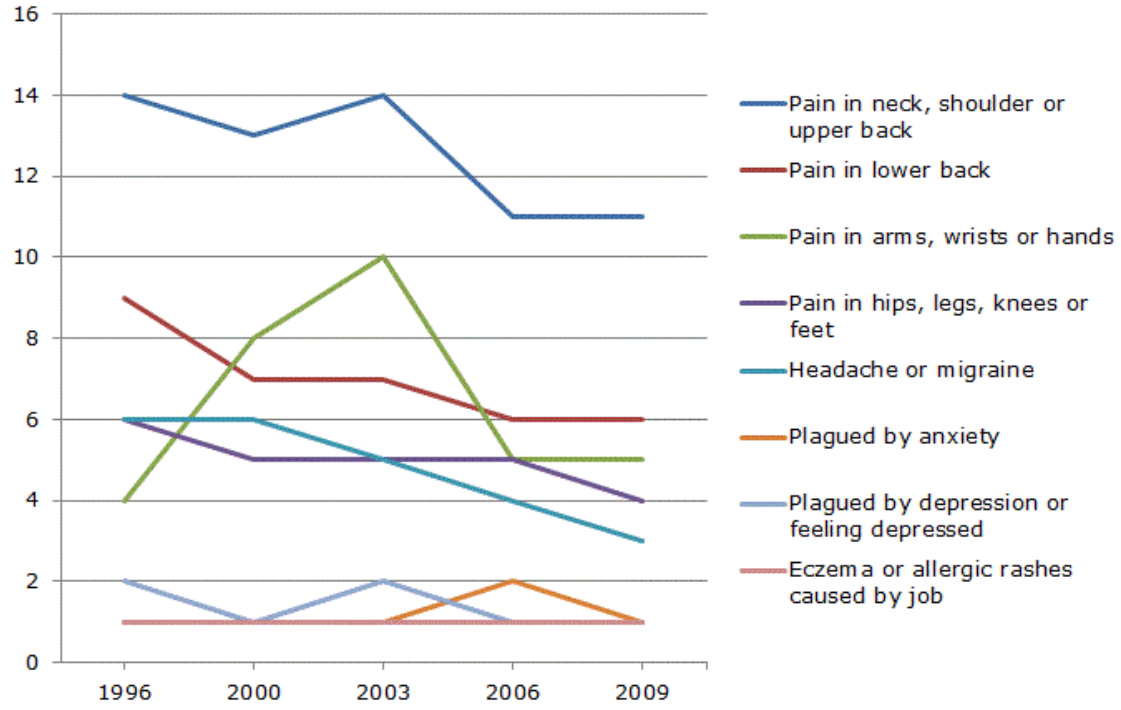

Figure 7: Trends in health problems and work*, 1996–2009 (%)

*(Workers who report that they are 'quite' or 'very bothered' by various health problems and that these problems are wholly or in part due to their work.)

Source: Stat Bank Norway (SSB)

Sickness absence

In LKU 2009, 17% reported having had at least one doctor-certified sick leave of 14 days or more in the previous year. Of these, about 37% reported that the absence was caused by health problems that could be entirely or partially attributed to the nature of their job.
Sick leave is generally higher for women than for men. Looking at the doctor-certified absences recorded in the NAV, we find that sickness absence among men increases steadily with age, particularly long-term absence. For women, the picture is somewhat different, as the incidence of sick leave among the 25–34 age group is higher than any other. Sickness during pregnancy accounts for almost half of the gender difference for this age group.
The incidence of the longest absences (with a duration of one or two years), however, increases with age.

Figure 8: Sickness absences of 14 days or more in last 12 months, 2000–2009 (%)

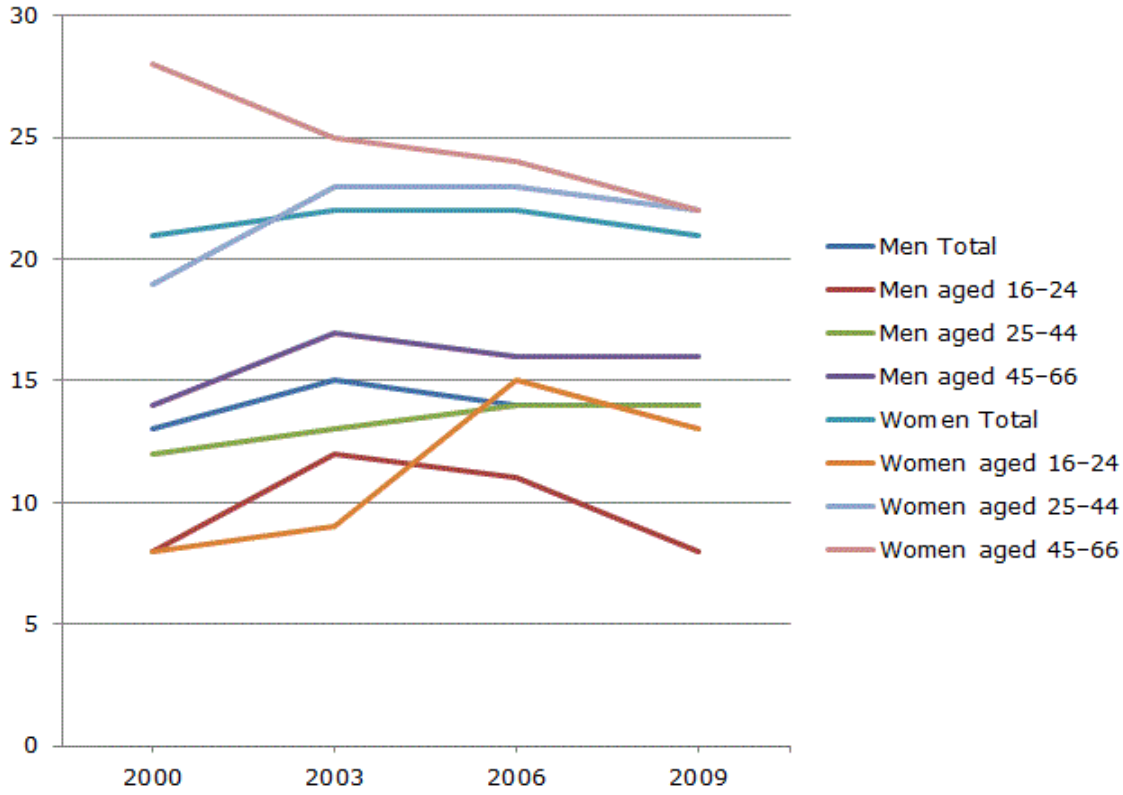

Figure 8: Sickness absences of 14 days or more in last 12 months, 2000–2009 (%)

Source: Stat Bank Norway (SSB)

Commentary

The work environment has been a priority area in Norway for many years. The Norwegian surveillance system for working conditions and occupational health stands out from most other countries in that, instead of using only one survey, the system gathers data from a variety of sources to build up as complete a picture as possible. The system has very good data for describing psychosocial, organisational and mechanical work, but at the moment has less complete data sources for the description of accidents, injuries and chemical exposure.

The overall picture of the report depicts a positive trend in working conditions and occupational health in general. Most people report that that they are satisfied with their jobs and have favourable working conditions.

However, although the overall results are positive, it should be noted that working conditions vary considerably between occupations and sectors. The design of the surveillance system will in future enable a greater focus on the characteristics of the various groups, their work situations and their different needs so they can be addressed accordingly.

Bjørn Tore Langeland, National Institute of Occupational Health

Reference

Statens arbeidsmiljøinstitutt (STAMI) [National Institute of Occupational Health] (2011), *Faktaboken om arbeidsmiljø og helse 2011* [Factbook on working and health 2011: Status and trends], STAMI, Oslo, available at

http://www.stami.no/faktabok-om-arbeidsmiljo-og-helse-2011?iid=99340&pid=STAMI-Article-ArtikkelBilder.Native-InnerFile-File&attach=1 (in Swedish with English summary, 6.6Mb PDF).

Appendix: Statistical sources

Level of Living Survey, Working conditions (LKU)

Level of Living surveys on working conditions are conducted by Statistics Norway (SSB) every third year with a representative sample of the Norwegian population. From 2006, the survey was expanded and the data in LKU 2009 are based on responses from more than 9,000 workers. The response rate in 2009 was 61 %. The study is considered to give a reliable picture of how Norwegian workers experience their working environment. LKU 2009 is the largest and most important single source of data for the 'Faktaboken om arbeidsmiljø og helse 2011'.

Labour Force Survey (AKU)

The Labour Force Survey is a continuous ongoing survey conducted by Statistics Norway (SSB). A total of approximately 24,000 people aged 15–74 are selected as a representative sample of the Norwegian population to respond to an interview about various aspects of their employment. The purpose of the survey is to get information on developments in employment and unemployment, the connection of various population groups to matters such as the labour market and working time arrangements. The response rate is approximately 90 %.

The Norwegian Labour and Welfare Administration (NAV)

The Norwegian Labour and Welfare Administration (NAV) consists of the state employment and welfare services and parts of the municipal social services. NAV has been the main source of information on approved occupational diseases, sickness, sick pay entitlement and disability rights. Sickness data include sickness absence among workers, while data on disability also covers the self-employed.

The Product Registry

The Product Registry is the government's central register of chemical substances and products that are imported and produced in Norway. The information is used in environmental management and the health and safety field. The registry is overseen by the Climate and Pollution Agency (Klif).

EXPO

EXPO is the exposure database of the National Institute of Occupational Health (STAMI), and contains data on chemical and biological exposure levels in air, biological material and material samples measured at Norwegian workplaces since the mid 1980s. The data provide indications of current exposure levels in Norwegian workplaces, at the same time as it provides a unique picture of the development of occupational exposure in Norway.

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