Work and health: How some are more equal than others

Social inequalities in health are growing in most European countries. And with public health policies tending to ignore how working and employment conditions play into this, the rise of non-standard forms of employment could widen the gaps further still.

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Although now retired, Aldo still holds a deep affection for his old job despite the scars he bears from it. A manual worker has a much shorter healthy life expectancy than a manager everywhere in Europe.
Image: © Martine Zunini

Spain has mortality atlases broken down by small geographical areas.[1] The higher the mortality, the darker the shading. If the maps for very different causes of death (cardiovascular disease, different cancers, suicides, infectious diseases, etc.) are overlaid, the dark areas tend to match up. A baby in Glasgow (Scotland) can have a life expectancy 10 years longer or shorter simply because of the social characteristics of the neighbourhood it was born in. Behind these geographical inequalities lie social inequalities. The darkest areas tend to be those where social conditions are least favourable: higher unemployment, higher proportion of manual workers, derelict industrial sites, etc.

The public health figures tell the same story. A 35-year-old French female manual worker has a disability-free life expectancy of 27 years, compared to a senior manager's 35 years[2] - a healthy life expectancy difference of eight years. Where total life expectancy is concerned (including years lived with disability), female managers can expect to live almost three years longer than female manual workers. Male manual workers die six and a half years earlier than male senior managers. Social inequalities in health are not just about mortality - they cross all health-related conditions and most injuries and disorders, both physical and mental, are a major factor in disabilities, the ability to live an independent life, the rate and consequences of aging. They scotch the idea that health is mostly conditioned by individual behaviour or genetic factors. Whether as commonly-held beliefs or scientific speculation, these beliefs mix simplistic guesswork with a deliberate whitewashing of the most inhuman and unacceptable aspects of employment relations.

Social inequalities in health are not a black-and-white contrast between the haves and have-nots, but a scale of changing shades of grey going up the social hierarchy. In epidemiology, these are called social gradients. They can be based on educational levels, occupational classifications, income categories, or social status of other family group members. All the data point to the glaring conclusion that property, power and work are distributed unevenly and health is largely determined by these social relationships.

Social inequalities in health in most European countries are showing a worrying trend.[3] The gaps closed over the four decades following World War II, but the overall increase in wealth and income inequalities seems to have reversed this trend. The most critical situation is that of some Central and Eastern European countries. In Estonia, the life expectancy gap between a 25-year-old male graduate and a man of like age with the least formal education has widened dramatically, rising to 13 years in 2000.[4]

A range of factors play into social inequalities in health, mutually reinforcing one another throughout life. What specific role do working conditions play in these inequalities? How can action for health at work reduce them? These are questions that tend to be underplayed. Working conditions are missing from a large part of the literature on social inequalities in health, while the overall impact of social relationships on health often slips off the radar of the stakeholders in health at work.

Some traditional contributors to social inequalities in health have receded for the great majority of Europe's population. Access to care is more or less guaranteed, albeit not equally or fully. Access to drinking water, a healthy diet and housing can be a problem for some highly marginalized groups, but these factors account for only a small part of all the social inequalities that are in evidence. The burden of infectious diseases remains a reality, but their role in overall inequality is far less than a century ago. This relative reduction in a combination of factors suggests that working conditions play a particularly important role. The worldwide EMCONET research network has released a report giving a good overall picture of this issue.[5] To appreciate the scale of the problem, it needs examining on several levels.

Physical working conditions

Working conditions can create physical risks. Hazardous machinery, awkward postures, toxic chemicals, noise, vibration - all these factors are unevenly distributed between occupations. The general trend is that the lower one goes down the job ladder, the more hazardous exposures tend to increase, often with a combination of exposures and a lower standard of prevention. This accumulation of hazardous exposures that are evident at a point in time of working life interact over the total length of a person's career. Broadly, it can be said that someone who has been exposed at work to carcinogens at the age of 25 has a much greater probability of being exposed to carcinogens at the age of 50. In some cases, the exposures will be identical, in others, they will be different. Most often, they will be combined with other health-endangering factors.

Relatively robust data are available on point-in-time occupational exposures in different European countries. Data on the build-up throughout working life are much patchier. Where they exist, they reveal the link between work activities and the stratification of society into social classes. An analysis of a set of factors on physical and mental wear has found that point-in-time data for a working life did not differ very significantly from data that incorporated changes in working conditions at different periods of workers' lives.[6] This suggests that there is an overall contextual consistency of individual life stories in social relations which marks the different stages of working life.

Work organization

Behind the physical conditions of work stands an organization of work in various forms. Human labour is a social activity. It is never confined to the relationship between an individual and their natural environment. It posits relationships of cooperation and hierarchy, a division of labour and different social valuations of activities. Flying an aeroplane, caring for babies in a nursery, preparing a meal, collecting refuse or selling drugs are all activities - legal or illegal, paid or unpaid – carried out on very different social terms. The description of their physical attributes will mark them out by the different actions, tools, materials, cognitive activities, etc. Their social position will set them within a hierarchical and unequal structure which will determine the links between the different persons involved in those activities, and between them and the rest of society. There is a continuity between social relations in and out of the workplace.

1. Benach J. et *al.* (2001) *Atlas de mortalidad en áreas pequeñas en España*, Barcelona.

2. Cambois E., C. Laborde, J.-M. Robine (2008) La double peine des ouvriers. Plus d'années d'incapacité au sein d'une vie plus courte, *Population et sociétés*, No. 441, January.

3. Mackenbach J. (2006) *Health Inequalities: Europe in Profile*, Rotterdam.

4. Leinsalu M., D. Vågerö and A. Kunst (2003) Estonia 1989-2000: Enormous Increase in Mortality Differences by Education, *International Journal of Epidemiology*, Vol. 32, p. 1081-1087.

5. www.emconet.org

6. Coutrot T. and L. Wolf (2005) *L' impact des conditions de travail sur la santé: une expérience méthodologique*, Paris.

Work organization can also be seen to be a key health determinant. Data on cardiovascular diseases show that problems increase in severity the lower down the social ladder one goes. The same applies to most mental health problems.

The role of work organization has often been studied on the basis of two sets of criteria – one focused on task discretion or degree of control, the psychological demands of work and social support, the others on the potential imbalance between the input and the reward. Data from numerous surveys show these criteria to be relevant and complementary. They help explain the wide gaps between occupational groups in areas as different as cardiovascular mortality and musculoskeletal disorders. They are sometimes used by separating psychosocial factors from the place occupied in the social pecking order. That kind of approach tends to reduce work organization analysis to perceived individual characteristics. UK research on public service workers argues a close link between these individual dimensions of work and socioeconomic status [7] which appears to be behind both an uneven distribution of the relevant factors (autonomy, recognition, etc.) and their greater health impact on the lower socioeconomic groups.

One of the most worrying developments in work organization is the increased time-pressure of work. This has a wide range of health impacts. It is a major contributor to musculoskeletal disorders which afflict almost one in four workers in Europe. It also adds to what can only be described as work-induced accelerated aging (see table).

Health disorders and work under pressure among workers aged 50 and over

	Never worked under pressure	Under pressure in the past	Currently under pressure
Pain	53%	65%	66%
Fatigue	43%	55%	61%
Sleep disorders	35%	46%	51%
Memory disorders	24%	34%	37%
Health deteriorated in recent years	23%	35%	41%

Source: Mardon C. and S. Volkoff (2008) Les salariés âgés face au travail "sous pression", *Quatre pages CEE*, No. 52, March

Job insecurity is bad for health

A second level of analysis is the employment relationship. There is an intrinsic insecurity in wage labour as an institution. History shows that the free market in labour developed only through duress. Impoverished populations were forced by the twofold impact of hunger and government violence to put their labour under the dominion of others. From the onset of the industrial revolution, the labour movement held that insecurity in check by creating balancing forces in the form of individual rights, collective rights and specific forms of organization and struggle. Social security has to varying extents in different countries loosened the constraints to decommodify human labour[8], enabling withdrawal from the labour market in particular circumstances like old age, illness or disability. Through unemployment or early retirement schemes, it permits workers to distance themselves to some extent from worsened working conditions. Vested rights can be undone. Over the past thirty years, the deterioration of employment relationships has worked against a real improvement in physical working conditions. This has played into growing inequalities. Three things are worth noting.

Unemployment is a key factor in declining health. This observation might seem counterintuitive if one were simply to list the physical factors in the workplace that affect health.

However, the link between unemployment and poor health can only be explained by looking at three features of what unemployment is:

1. Unemployment rarely means doing no work at all. It is a legal status. For women, it usually means adding yet more of the family work to their load. In the general population, it may go together with undeclared work in particularly poor conditions;

2. Unemployment is almost never a permanent status throughout adult life. It can often occur after spells of work which have already involved health damage. It is common among people rendered vulnerable by poor health, including from non-work-related factors. So, unemployment rates are generally found to be higher among people with mental illness, cancer or who have suffered a work accident even though still healthy enough to work. It is as if by excluding cancer patients from work, employers were second-guessing future productivity losses or the nuisances of adapting working hours or jobs;

3. Unemployment is not just a legal status. It also partakes of social relations. In addition to lost income, it often also undermines social networks, increases isolation and feelings of worthlessness.

Insecurity is on the rise in the working world, and may take specific forms for young people,

women and immigrants. It may be reflected in a special legal status. European Union (EU) countries have witnessed a startling rise in so-called non-standard forms of employment which are now becoming the norm for some groups! In the Netherlands, three-quarters of women work part-time, compared to an all-EU average of about one-third. This reflects the lack of public childcare provision and the unequal division of family labour. But it is not just that: part-time work is often imposed by employers and denotes worsened working conditions and reduced career opportunities. Young people face myriad kinds of non-standard jobs ranging from apprenticeships to a wide variety of work placements, a much higher incidence of agency work and less job stability. Immigrant workers, and the descendants of immigrant workers of certain nationalities, are also facing rising insecurity.

Work can be subcontracted under a fixed, full time employment contract. But there is a clear link between subcontracting and worse working conditions. Cost-cutting considerations are mainly behind increased outsourcing by business. It tends to impose a division of labour whereby the outsourced activities lead both to over-exposure to occupational hazards and employment uncertainty. Unit outages for maintenance and repair in nuclear power stations incur significantly greater exposure to ionizing radiation for outside subcontractors than permanent employees. In the carmaking industry, lean production imposes work rates that are hard to sustain over time for workers who make the different components of a car which is generally assembled by the work specifier. Multi-tier subcontracting is a major cause of fatal accidents in the building industry.

Working and employment conditions interact in many ways. For individuals, a lower level of job security is generally reflected in worse working conditions. Spanish research based on a large-scale trade union survey has developed a comprehensive precariousness scale that takes a range of factors into account.[9] These include conditions of employment but also the exercise of rights, pay levels, the ability to influence working hours, the risk of unemployment, etc. The study found a close correlation between adverse health outcomes and insecurity. It shows higher levels of insecurity in the lowest socioeconomic groups and among women, young people and immigrants. One merit of the study is to highlight the importance of workforce-driven approaches in the workplace.

> Male manual workers die six and a half years earlier than male senior managers.

Nuking personal development

Health is an ongoing process played into by socially constructed expectations and the ability to adapt and repair anything that limits them. It is not so much a state as a balance that is constantly under challenge from various factors and may, under certain conditions, recover or improve. While many physiological and psychological processes operate subconsciously, maintaining health is related to the individual's life objectives. The centrality of work for adults in our society means that more than direct damage to health, work plays an important positive and negative part in maintaining health. Swedish studies report often worse health conditions

7. The Whitehall II study was set up in 1985 by Professor Sir Michael Marmot to investigate the importance of social class for health by following a cohort of 10,308 working men and women. Read more on: www.ucl.ac.uk / whitehallII

8. Esping-Andersen G. (1990) *The Three Worlds of Welfare Capitalism*, Princeton University Press.

9. Vives A. *et al.* (2010) The Employment Precariousness Scale (EPRES): psychometric properties of a new tool for epidemiological studies among waged and salaried workers, *Occupational and Environmental Medicine*, Vol. 67.

among women homemakers for reasons that are probably less due to the physical conditions of what they do than being trapped in the home and having fewer and less diverse social ties than women in paid work. Contingent employment status and poorer working conditions have an impact beyond the individual risk factors found in the work itself.

The American sociologist Richard Sennett has highlighted the role of flexible working in undermining personal development and all forms of long-term commitment.[10] It is a useful analysis for recontextualizing what are sometimes called individual risk behaviours. A big part of public health policies focuses on changing individual health behaviours largely in isolation from their social determinants. Nagging building workers to eat more fruit or stop smoking even though they are hugely exposed to carcinogens in their work is disingenuous at best and smacks of cynical, bureaucratic box-ticking. There is a significant link between behaviours singled out as individual and the quality of work life. It is a link pointed to in a wide range of studies. In road safety, for instance, younger male manual workers have a known higher incidence of more severe driving accidents than other social groups. Likewise, harsher working conditions can encourage smoking or heavy drinking. The failure of many prevention campaigns can be put down to a wilful disregard of the way working conditions contribute to shaping specific types of behaviour.

Perhaps the best picture to take away is a set of overlapping circles over large areas. Physical working conditions, work organization, employment conditions and life objectives all interact with one another. Each of these spheres has individual and collective dimensions. All are cut across by gender relations. The links between work and social inequalities of health point to an ownership of human bodies through a social rationale of wealth and power accumulation at one extremity of our societies. They show the limitations of policies that disconnect occupational health from public health. ●

10. Sennett R. (1998) *The corrosion of character: The personal consequences of work in the new capitalism*, W.W. Norton & Company, New York, 176 p.

Nurses and bricklayers – one fight

Question: what do hospital nurses and building workers have in common? Answer: not a lot, you'd say. Nurses work with people, builders with materials. Demarcation of construction and civil engineering trades is lost in the mists of time. Nursing as a profession emerged a bare century ago.

What they do share is that none of us can do without these two occupations. Buildings of one kind or another are everywhere in our daily lives. It is hard to conceive of any human being having no contact with a hospital between cradle and grave. Both activities have long been imbued with now-vanished sacred or religious overtones.

Comparing the impact of working conditions on the health of these two groups throws up some interesting things. A big part of the workload in both groups is eclipsed by gender segregation. Manliness, physical strength and endurance are depicted as qualities that building workers naturally have, while caring, comforting, communicating, dedication to the welfare of the sick, doing a "touchy-feely" type of job are portrayed as supremely female characteristics. These are stereotypes that press heavily on both. The real workload soon sorts out those who will and will not cope after hiring. The build-up of stresses and strains over the years makes it impossible to do these jobs for a working lifetime. Many construction workers and hospital nurses pack in long before retirement age.

What this shows is that not all men have the "natural" manliness required for building work and that by no means all women can juggle the multitasking roles of mother, wife and daughter they are supposed to reproduce in their work. Not only that but both occupations involve exposures to multiple risks: hazardous chemicals, heavy lifting, ergonomic constraints. On top of these shared factors, nurses also have what may be taxing contacts with patients and their relatives, highly unsocial working hours, and a rigidly hierarchical organization where their skills are often undervalued by doctors. Building workers contend with job insecurity, multi-tier subcontracting, and outdoor work in all weathers.

Some factors make a positive contribution to health. For nurses, these include social recognition that results from long struggles linking better working conditions with the quality of care. Their struggles are what have won nurses their high public profile. Despite an increasing time-pressure of work, building workers enjoy greater autonomy than in many industries, work-bred feelings of mutualism and traditions of organization. The scope for overseeing or computer-tracking builders' work is far less than in industrial production, but something that nursing is much more prone to.

Health damage in building workers shows up in a high early death rate, dramatically so for three causes of death: falls, cancer and mental health problems. There is also a very high work disablement rate. A Swiss survey found an average percentage disability rate of 15% among men aged 45-65 - 4% for architects, engineers and technicians, but 40% for construction workers.

A study in ten European countries shows that generally, a very high percentage of nurses aged between 30 and 40 frequently think about leaving their job, usually because of declining (mental and physical) health due to poor working conditions (especially working time arrangements and burnout). The study also found that in most cases, those who thought about leaving the profession actually did so. Nurses suffer working conditions that wear them down without necessarily resulting in higher mortality, although some causes of mortality (like breast cancer associated with night work and exposure to certain chemicals) remain a concern.

Learn more

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