





China's mines: the deadliest in the world



Child labour: an Indian girl scavenges for coal

Reducing the health inequalities associated with employment conditions

Fair and efficient government policies on labour and welfare can reduce health inequalities that accompany poor employment conditions and unemployment, explain **Joan Benach** and colleagues

The current economic recession has caused striking levels of unemployment, underemployment. and job insecurity globally. The International Labour Organization (ILO) estimated that the number of unemployed people was 212 million in 2009, and it projects the global unemployment rate in 2010 to be 6.5%, with a confidence interval ranging from 6.1% to 7%. In rich countries in the Organization for Economic Co-operation and Development more than 57 million people, or 10%, are unemployed in 2010,1 the current unemployment rate in Spain is 20%, and in the United States the rate is around 10% using conservative estimates. The ILO has predicted that the impact of the economic crisis on vulnerable employment is likely to have increased the number of working poor—those living on \$1.25 (£0.80; €0.90) a day-by 215 million workers between 2008 and 2009, and that in 2009 there were between 1.48 and 1.59 billion vulnerable workers worldwide.2 These developments will increase global health inequalities, and inequalities between social classes within countries, because unemployment and underemployment cluster among lower income countries and workers.3 In this article we explore the relation between unemployment, poor working conditions, and health, and argue that governments and public health agencies should recognise that fair employment conditions should be regarded as a human right.

Globalisation increases inequalities

Globalisation has increased the inequality in working conditions across regions, countries, social groups, and occupations. It has also generated substantial social inequalities in health. Worldwide, about 1000 workers, mainly located in poor regions and countries, die every day because of unsafe working conditions, and an additional 5000 people die from work related diseases.45 In rich regions, such as the European Union, long established hazards at work-for example, exposure to chemical products, radiation, or vibrations—have remained stable or slightly decreased in the past decade. Studies, however, report the increase of other hazards, such as work intensification and non-standard employment, and the strong links between these different hazards and health inequalities. For example, working class people tend to be employed in jobs that have poor psychosocial working conditions, and large and persistent health inequalities exist.67 In middle and low income countries, most workers are employed in agriculture or manufacturing. They face heavy physical work, the risk of injury, and the risk of poisonings from pesticides and biological hazards. Workers are unequally exposed to hazardous working conditions within countries and as a result health inequalities vary across occupation, gender, ethnicity, migrant status, and other forms of social stratification.8

Employment conditions are related to working conditions, yet are different. They are the terms under which a person is engaged in a job. These may be, but are often not, prescribed by law under a contract. Employment conditions range from full time permanent employment, to precarious employment, informal employment, child labour, and slavery or bonded labour. Employment relations—the individual and collective power relations at work—also affect employment conditions. Both are influenced by the labour market and welfare state policies of individual countries.⁸⁹

Employment and working conditions

In wealthy countries, employment conditions are usually regulated. In poor countries, by contrast, employment agreements tend not to be explicitly regulated, and a high proportion of people work in the informal sector. In both rich and poor countries, groups with high unemployment rates include workers without credentials, single mothers, ethnic minorities, young adults, and recent immigrants. In rich countries, workers with only primary education are three times as likely to be unemployed as those with tertiary education (see box). In middle and low income countries between half and three quarters of workers are informally employed, with women being over-represented in this group.

Children are among the most affected by global labour market inequalities. More than 300 million children (aged between 5 and 17 years)



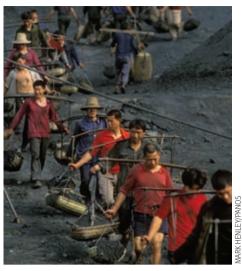


are economically active, and over two thirds are child labourers. Between 12 and 28 million people globally are enslaved. Most of them are in Asia, and at least 2.4 million people, mainly women and girls, are in forced labour as a result of human trafficking.⁸

Most of the data that show a link between ill health and job insecurity, underemployment and precarious employment, informal employment, child labour, and forced labour come from wealthy countries; little research has been conducted in middle and low income countries. The box shows some of the evidence linking employment conditions and health by employment type.

Employment relations

The more support and protection people have from



The Calcutta stock exchange

the welfare state, the greater the extent to which they can maintain their way of living when they do not have a job. Where social safety nets are adequate workers can exit the labour market if they need to and avoid turning to hazardous work or adverse working environments. Although workers and employers have a shared interest and responsibility in maintaining a healthy working environment, only the employer controls the terms and conditions of service, and their over-riding concern is to maximise profits.²¹ The key to understanding employment relations and the impact they have on the health of workers is to realise the importance of the bargaining power that workers have; a leverage which allows them to push for a stronger welfare state and better working conditions.822

In private market economies, labour unions and



A worker sprays crops in Indonesia

pro-labour social movements are the most effective institutional means to ensure safety at work.2223 The relative power of employers, workers, and different types of employees has a profound influence on health and safety at work across welfare state regimes. Research has shown the important role played by the psychosocial work environment, including the amount of control and participation employees have in the workplace.24 For example, analyses on three cohorts of middle aged civil servants in England, Japan, and Finland found that there were significant grade differences in physical functioning in all cohorts and in both men and women. Those with low socioeconomic status had worst health. However, the differences in health among non-manual workers were smaller in the Finnish cohort, suggesting that more equitable

EVIDENCE ON EMPLOYMENT CONDITIONS AND HEALTH

UNEMPLOYMENT

- A study in the European Union identified unemployment as one of the 10 most important contributors to the total burden of disease in the 1990s. ¹⁰ In Britain it has been estimated that the direct effect of reducing unemployment has prevented up to 2500 premature deaths a year, but the indirect effects of being employed are thought to be far greater. ¹¹
- Unemployment increases rates of depression, particularly in young people who have never worked and who are usually the worst hit when jobs are scarce. Parasuicide rates in young men who are unemployed are 9.5 to 25 times higher than in employed young men.¹²
- Unemployed people are more likely to be ill, especially those who have never worked or have only had jobs that are badly paid.¹³

PRECARIOUS EMPLOYMENT

- Job insecurity and downsizing have negative effects on self reported morbidity and mental health.
 These effects tend to increase with chronic exposure, and their impact is more detrimental among manual workers.¹⁴¹⁵
- Temporary workers are exposed to more work hazards than workers on permanent contracts These hazards may include being in painful and tiring positions, having to listen to intense noise, carrying out repetitive movements, and exposure to psychosocial stressors.¹⁶
- Job precariousness has a detrimental impact on self reported health and mental health.¹⁷ How precarious a job is will be affected by the labour market and power relations in the workplace.¹⁸

INFORMAL WORKERS

- Informal workers are often more exposed to dangerous work environments, have higher risk for occupational injuries or diseases, and less favourable health indicators than those holding formal jobs.⁸
- Informal work is associated with individuals rating their health as poor, and it also affects how those people living in the same house as an informal worker rate their health.
- Workers with no social security have worse health indicators than workers with some form of social security through their employment.²⁰

CHILD LABOURERS8

- More than one third of all child labourers are engaged in hazardous work.
- Exposure to hazards at work may be especially harmful to children. They are extremely vulnerable to biological or chemical agents because their immune system is immature, and they are not as capable as adults of supporting heavy workloads.

BONDED AND SLAVE LABOURERS8

 People in forced labour and slaves are exposed to the worst hazards, although information on these situations is extremely limited.

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Human conveyor belts haul coal in China

welfare regimes may help reduce the health gap.²⁵

The political tradition of a country is a key determinant of its labour laws, regulations, and level of social protection. Globally, the world may be divided into different types of labour markets, according to national incomes and countries' political economy. 26 These labour markets reflect the role of the state and, in wealthy countries, there is evidence that the relative power of labour institutions is linked to population health. ²⁷ Wealthy countries with strong labour institutions, such as Sweden, tend to have the least harmful forms of employment relations, whereas equally wealthy but less labour friendly countries, such as the United States, have higher occupational fatality rates.^{22 28} Only a few countries have policies for integrating employment policies into economic and social policies. These include the Netherlands and Denmark.²⁹ International institutions such as the United Nations, World Trade Organization, North American Free Trade Agreement, Association of Southeast Asian Nations, or the Southern Common Market should recognise fair employment conditions-that is, freedom from coercion, job security, a fair income, job protection, respect and dignity, workplace participation and enrichment, and lack of alienation—as universal human rights.8

Government policies

An important social effect of economic crises is the rapid increase in unemployment. This increase has direct and indirect effects on the health of workers. Direct effects include the generation of uncertainty, poverty, and social exclusion that can lead to mental health problems. ^{17 24} Indirectly, the pressure on workers increases. The threat of losing their jobs becomes a powerful disciplinary mechanism that is more powerful the higher the level of unemployment. ³⁰ The social and population health impact of the present economic crisis will vary depending on which social policies are adopted in response. ^{31 32} Research suggests that the best way for govern-



A 13 year old unpaid apprentice in Bangladesh

ments to protect the health of their population is by investing in policies and practices that keep people employed, help those who lose their jobs cope with the negative effects of unemployment, and getting unemployed people back into work as soon as possible. ³¹ Analyses also show that the beneficial effects of unemployment compensation are not equally distributed across different gender, family role, and social class categories—for example, the mediating role of social class in determining the impact of unemployment on mental health differs depending on sex and family roles. ³³ Therefore unemployment insurance should be universal and achieve a substantial degree of income replacement to guarantee a healthy standard of living for all groups.

Governments can take action in several ways. They can make a large economic investments—for example, a "stimulus package," and regulate the financial sector. They can also promote active labour policies, such as government led job creation, and pursue active labour market policies such as retraining and job placement. ²⁹ Governments can also expand social protection through measures such as unemployment insurance, and income support. ³² Research in 26 European countries suggests every \$10 per person investment in active labour market programmes reduces the effect of unemployment on suicides by 0.038%.

The role of health professionals

Health professionals play a crucial role in dealing with the health consequences of people who are unemployed, underemployed, or working in adverse environment or under less than optimal conditions. They must also be able to identify the employment and work related determinants leading to ill health in their patients. Health professionals can also assist in providing evidence to clarify the employment and work related health effects of the current crisis. They should also advocate for governments to adopt fairer and more effec-



A jeans factory in China

tive labour market and social policies to reduce employment related health inequalities.

Enacting such policies should be a central objective for governments. Multinational institutions, such as the ILO and WHO, can encourage this by setting out initiatives that prioritise the adoption of fair employment policies. At every level decision makers need to take on board the views of unions, social movements, and affected communities. International political, economic, and public health institutions should recognise fair employment conditions as universal human rights.³⁴ Healthy, fair employment will not occur if left to the market alone. It must be made a public health priority.

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- News: Doctors are one of the "linchpins" in closing the UK health inequalities gap (*BMJ* 2010;340:c3060)
- Observations: Crocodile tears for health inequality (BMJ 2010;340:c2970)



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▶ Professor Michael Marmot, chair of the World Health Organization's commission on social determinants of health, discusses the effect of the world's financial crisis on global health in a *BMJ* video at http://www.bmj.com/video/

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- Organization for Economic Co-operation and Development. Unemployment in OECD countries to approach 10% in 2010, says OECD. www.oecd.org/docu mentprint/0,3455,en_2649_33927_43136377_1_1_1 1.00.html
- International Labour Office. Global Employment Trends January 2010. http://www.ilo.org/wcmsp5/groups/ public/---ed_emp/---emp_elm/---trends/documents/ publication/wcms_120471.pdf
- 3 WHO Commission on Social Determinants of Health. Commission on Social Determinants of Health Final Report. Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. WHO 2008
- 4 Hämäläinen P, Takala J, Leena K. Global estimates of fatal occupational accidents. Saf Sci 2006:44:137-56.
- 5 Hämäläinen P, Takala J, Leena K. Global estimates of fatal work-related diseases. Am J Ind Med 2007;50:28-41.
- 6 Parent-Thirion A, Fernández Macías E, Hurley J, Vermeylen G. Fourth European Working Conditions Survey: European Foundation for the Improvement of Living and Working Conditions, 2007.
- 7 Marmot M, Siegrist J, Theorell T. Health and the psychosocial environment at work. In: Marmot M, Wilkinson RG, eds. Social determinants of health. Oxford University Press, 1999:105-31.
- 8 Benach J, Muntaner C, Solar O, Santana V, Quinlan M, EMCONET Network. employment, work, and health inequalities: a global perspective. (Forthcoming, 2010).
- 9 Esping-Andersen G, Regini M. Why deregulate labour markets? Oxford University Press, 2001.
- 10 Diderichsen F, Dahlgren G, Vågerö D. Analysis of the proportion of the total disease burden caused by specific risk factors. National Institute for Public Health, 1997.
- Mitchell R, Dorling D, Shaw M. Inequalities in life and death: what if Britain were more equal? The Policy Press, 2000.
- Dorling D. Unemployment and health. *BMJ* 2009;338:b829.
- Bartley M, Sacker A, Clarke P. Employment status, employment conditions, and limiting illness: prospective evidence from the British household panel survey 1991-2001. J Epidemiol Community Health 2004;58:501-6.
- Bosma H, Marmot MG, Hemingway H, Nicholson AC, Brunner E, Stansfeld SA. Low job control and risk of coronary heart disease in Whitehall II (prospective cohort) study. BMJ 1997;314:558-65.
- 15 Ferrie JE. Is job insecurity harmful to health? JR Soc Med 2001;94:71-6.
- 16 Virtanen M, Kivimaki M, Joensuu M, Virtanen P, Elovainio M, Vahtera J. Temporary employment and health: a review. Int J Epidemiol 2005;34:610-22.
- 17 Artazcoz L, Benach J, Borrell C, Cortes I. Social inequalities in the impact of flexible employment on different domains of psychosocial health. J Epidemiol Community Health 2005;59:761-7.
- 18 Vives A, Amable M, Ferrer M, Moncada S, Llorens C, Muntaner C, Benavides FG, Benach J. The Employment Precariousness Scale (EPRES): Psychometric properties of a new tool for epidemiological studies among waged and salaried workers. Occ Env Med 2010 (in press).

- 19 Giatti L, Barreto SM, César CC. Household context and self-rated health: the effect of unemployment and informal work. J Epidemiol Community Health 2008;62:1079-85.
- Giatti L, Barreto SM, César CC. Informal work, unemployment and health in Brazilian metropolitan areas, 1998 and 2003. Cad Saúde Pública 2008;24:2396-406.
- Muntaner C, Lynch JW, Hillemeier M, Lee JH, David R, Benach J, et al. Economic inequality, working-class power, social capital, and cause-specific mortality in wealthy countries. *Int J Health Serv* 2002;32:629-56.
- 22 Chung H, Muntaner C. Political and welfare state determinants of population health. *Soc Sci Med* 2006:63:829-42.
- 23 Silver BJ. Forces of labor. Cambridge University Press, 2003.
- 24 Marmot M, Siegrist J, Theorell T. Health and the psychosocial environment at work. In: Marmot M, Wilkinson RG, eds. Social determinants of health. Oxford University Press, 2006:97-130.
- 25 Sekine M, Chandola T, Martikainen P, Marmot M, Kagamimori S. Socioeconomic inequalities in physical and mental functioning of British, Finnish, and Japanese civil servants: role of job demand, control, and work hours. Soc Sci Med 2009;69:1417-25.
- 26 Chung H, Muntaner C, Benach J; EMCONET Network. Employment relations and global health: a typological study of world labor markets. *Int J Health Serv* 2010;40:229-53.
- 27 Egan M, Petticrew M, Ogilvie D, Hamilton V, Drever F. "Profits before people"? A systematic review of the health and safety impacts of privatising public utilities and industries in developed countries. J Epidemiol Community Health 2007;61:862-70.
- 28 Concha-Barrientos M, Nelson DI, Fingerhut M, Driscoll T, Leigh J. The global burden due to occupational injury. Am J Ind Med 2005;48:470-81.
- 29 Wilthagen T, Tros F. The concept of "flexicurity:" a new approach of regulating employment and labor markets .Transfer: European Review of Labor and Research 2004;10:166-186
- 30 Shapiro C, Stiglitz J E. Equilibrium unemployment as a worker discipline device. Am Econ Rev 1984;74:433-44.
- Stuckler D, Basu S, Suhrcke M, Coutts A, McKee M. The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. *Lancet* 2009;374:315-23.
- Levinson M. The economic collapse. *Dissent* 2009:61-5.
- 33 Artazcoz L, Benach J, Borrell C, Cortès I. Unemployment and mental health: Understanding the interactions among gender, family roles, and social class. Am J Public Health 2004:94:82-8.
- 34 Benach J, Muntaner C, Solar O, Santana V, Quinlan M. Conclusions and Recommendations for the Study of Employment Relations and Health Inequalities. Int J Health Serv 2010:40:315-22.

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Things to be afraid of

Julian Sheather owns up to a fear of doctors. "I am a doctor myself—of philosophy, granted—and I work with doctors day in and day out. But put me in a patient's cap and wheel me before a medic and some traitor part of me will gibber and quake," he says. "It is not, I should stress, a fear of diagnosis, not a fear of bad news. It is a fear of doctors."

Joe Knight is concerned that media scares adversely affect teenagers like him: "Every day the government slaps yet more absurd age restrictions on the last few activities where we can break a sweat and have fun. For example, a school ice skating trip had to be abandoned because the months of careful planning clearly weren't enough to prove that a small group of fourteen year old kids could safely navigate a skating session without someone dying or losing a vital limb."



Meanwhile, Andrew Burd struggles to define cosmetic surgery. "I have spent a considerable amount of time over the years considering the word 'cosmetic' and putting this into some sort of context," he writes. "My first realisation about the sensitivity of the term was overhearing the heated theatre coffee room conversations of my seniors talking about territory, training, cowboys, etc. That was some 30 years ago, and nothing much has changed."

Joe Collier blogs about Tamiflu stockpiling: "Because of four key clauses in the pricing contract drawn up between government and the drugs industry, we in the United Kingdom stand to lose little or nothing. The four particular clauses form part of the 2009 Pharmaceutical Price Regulation Scheme. The scheme is an agreement between the UK government and each of the drug companies that sells brand name medicines to the NHS. In brief, the scheme states that, taking into account all the drugs a company will sell to the NHS in the forthcoming year, there will be an agreed target maximum amount the NHS will pay."

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