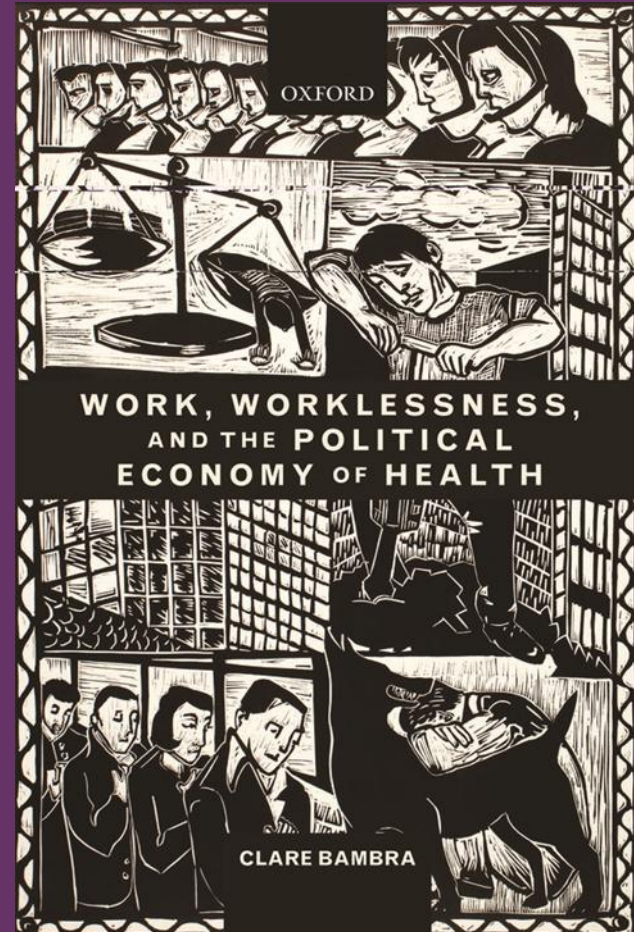


*Work,
Worklessness and
Health:
Geographical
Perspectives*



Aims and Structure

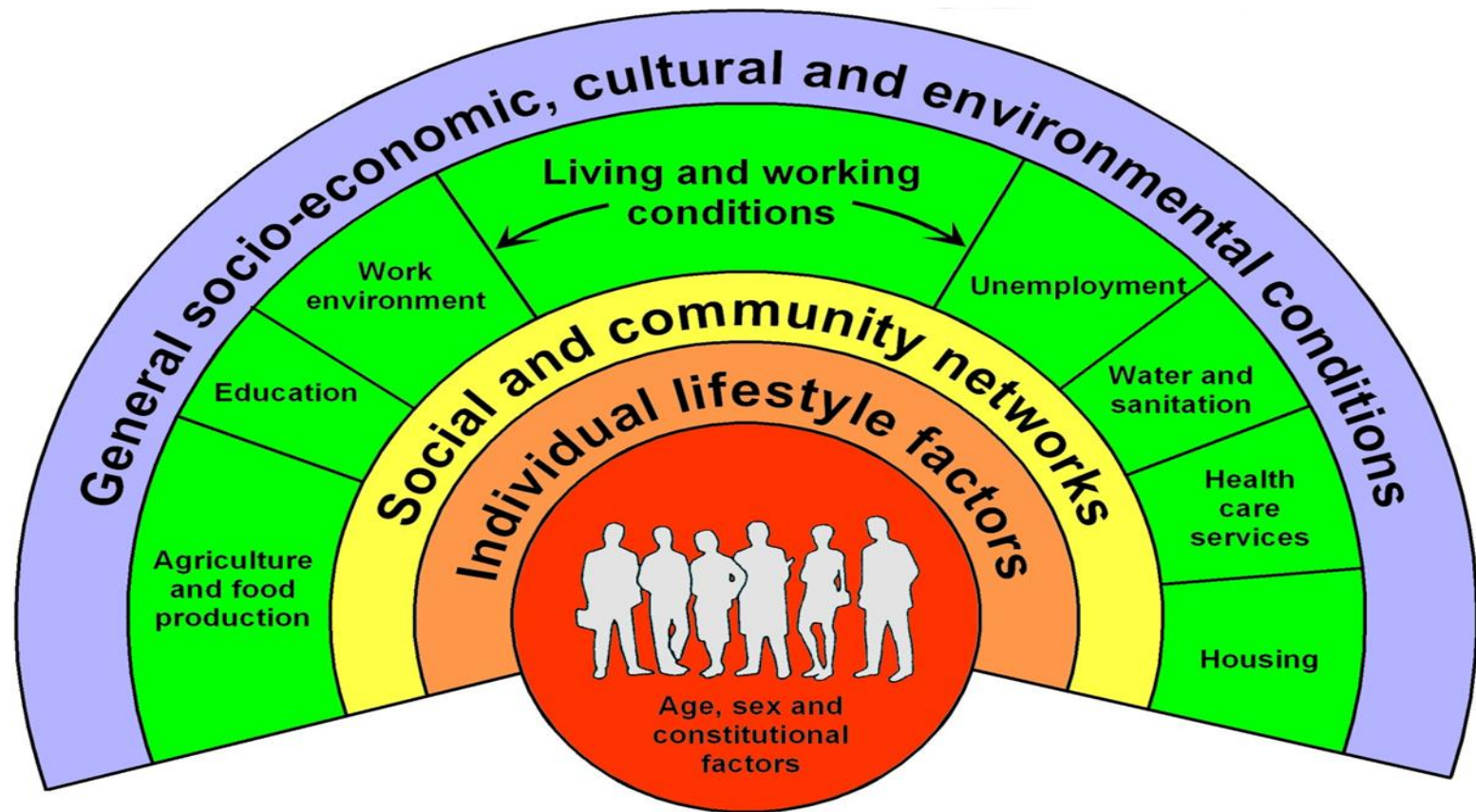
Aims:

- Work and worklessness as social determinants of health and health inequalities
- Geographical insights from comparative research

Structure:

- 1) Physical work environment
- 2) Psychosocial work environment
- 3) Unemployment
- 4) Health-related worklessness
- 5) Comparative geographical perspective

Social Determinants of Health



Source: Dahlgren and Whitehead, 1991

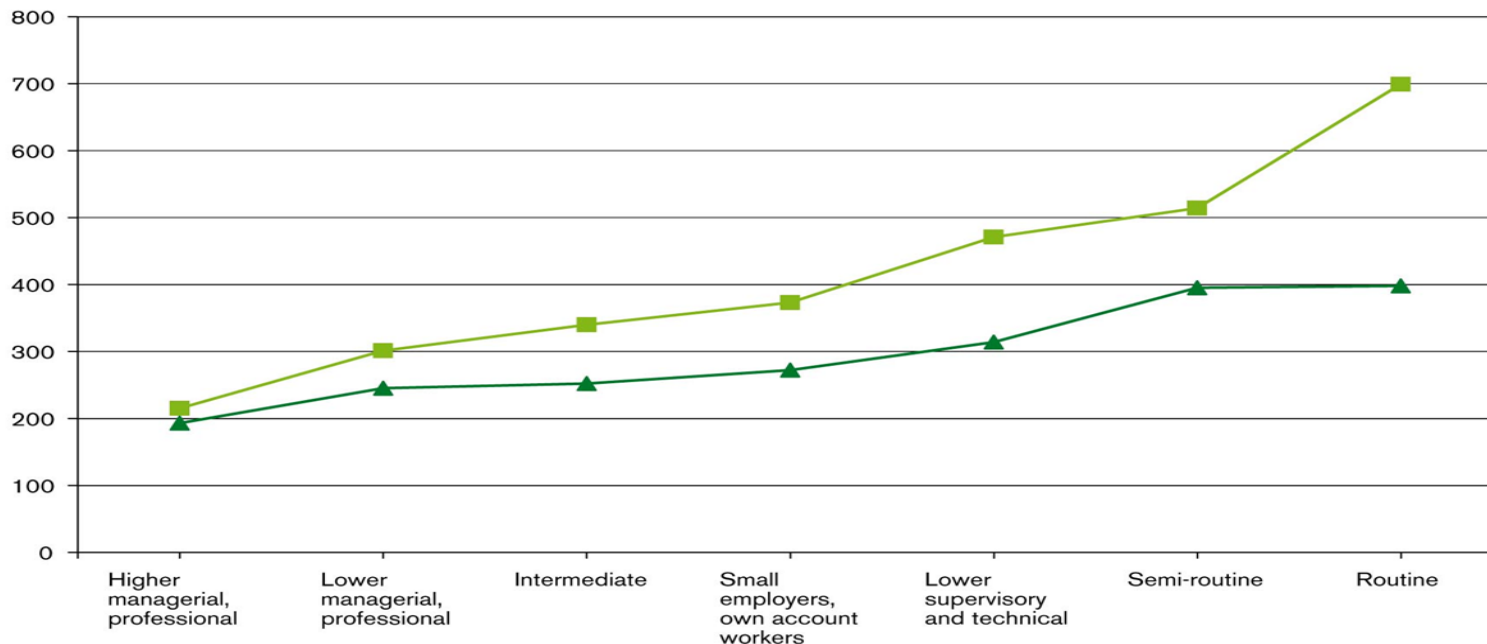
Health Inequalities: Marmot Review 2010

- **Infant mortality** rates are **16% higher** in children of routine and manual workers as compared to professional and managerial workers
- **Smoking** rates are **almost double** in routine and manual workers as compared to professional and managerial workers (28% to 16% men and 24% to 14% women)
- **Obesity** rates are **1/4** higher amongst men and **2.5** times higher amongst women routine and manual workers (27% and 34%) as compared to men and women professional and managerial workers (21% and 14%).
- **Deaths** from cardiovascular diseases are **2.7 times higher** in the 20% most deprived areas compared to the 20% least deprived
- **Alcohol** related hospital admissions are about **2.5 times** higher in the 20% most deprived areas compared to the 20% least deprived areas

Geographical Variation in HI

Figure 2 Age standardised mortality rates by socioeconomic classification (NS-SEC) in the North East and South West regions, men aged 25–64, 2001–2003

Mortality rate
per 100,000



—■— North East
—▲— South West

Notes: NS-SEC = National Statistics Socio-economic Classification
Source: Office for National Statistics⁶

1. Physical Work Environment

- Important factor in 19th century public health debates
- Lack of current discourse: de-industrialisation, psychosocial work environment, health and safety regulation.
- Significant minority of European work force still exposed to potentially hazardous physical work environment
- Chemical, ergonomic and environmental risks
- Socially patterned exposure so still important to health and health inequalities



Physical hazard		% EU workers exposed 2010	High risk work	Health effects
Chemical	<i>Handling chemicals</i>	15.3	Construction and maintenance, auto repair, painting, and construction, mining, and agriculture.	Respiratory diseases, cancers, hypertension.
Environment	<i>Noise</i>	29.0	Call/contact centres, construction, demolition work, road repair, engineering, manufacturing.	Acoustic shock injuries, tinnitus, hypertension, stress, fatigue.
	<i>Vibrations</i>	22.5	Construction, road repair, mining, machinery operators, drivers.	Vibration syndrome and vibration-induced white finger, musculoskeletal disease (particularly hand and arm, lower back)
Ergonomic	<i>Heavy loads</i>	33.5	Health care, air transportation, food processing, mining, goods manufacturing.	Musculoskeletal disease (particularly lower back)
	<i>Repetitive work</i>	30.5	Assembly line, packaging, machinery operators, clerical work, call/contact centres.	Musculoskeletal disease (particularly repetitive strain injuries), stress and anxiety.
	<i>Shift Work</i>	17.0	Assembly line, health care, mining, manufacturing, retail.	Gastrointestinal problems, cardiovascular disease, fatigue, sleep problems, injuries.

Health Inequalities

- Exposure to hazardous physical work environments is higher amongst lower skilled workers
- The health problems associated with the physical work environment are also more prevalent amongst manual than non-manual workers.



Regular exposure to potentially hazardous physical working conditions by occupation top v bottom (EU-27, 2010).

		Managers and Senior Officials	Professional Occupations	Process, Plant and Machine Operatives	Elementary Occupations
<i>Chemical</i>	Handling chemical substances	9.7	8.8	18.3	19.9
<i>Environment</i>	Noise	22.1	20.3	55.1	29.2
	Vibrations	15.5	9.1	51.8	25.3
<i>Ergonomic</i>	Heavy loads	29.7	11.2	51.9	48.7
	Repetitive work	50.9	45.1	76.5	74.9
	Shift work	8.8	11.6	34.5	19.2

UK injury rates per 100,000 employees by occupational status – top v bottom (2008/09)

Occupational class	Major injuries	All reported injuries
(1) Managers and Senior Officials	44	134
(2) Professional Occupations	55	188
(8) Process, Plant and Machine Operatives	346	1 725
(9) Elementary Occupations	177	992
<i>All Occupations</i>	<i>108</i>	<i>521</i>

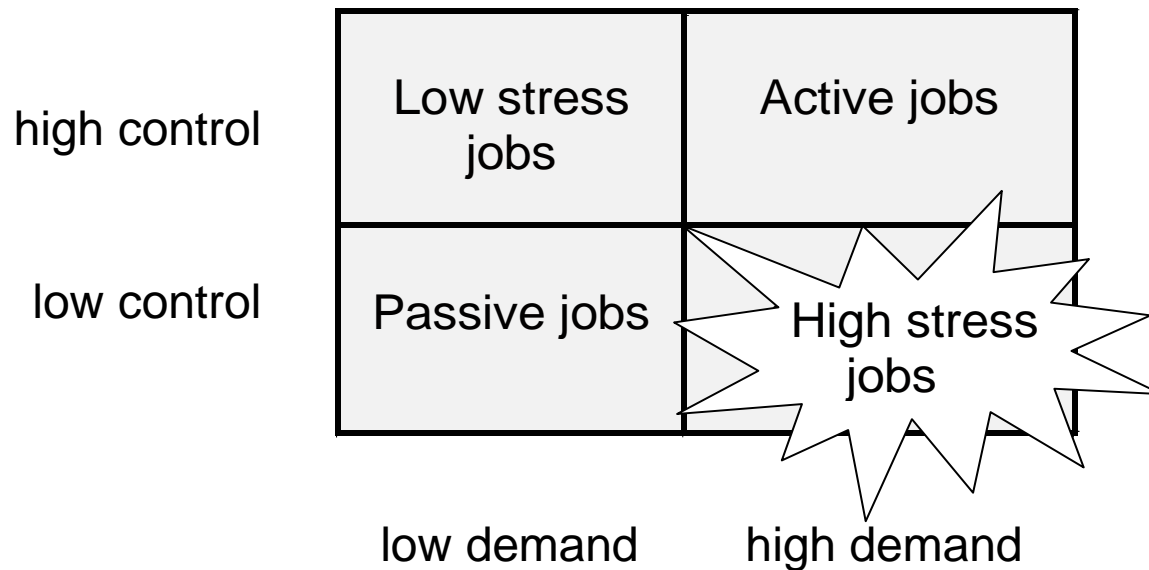
^a UK Standard Occupational Classification, Source: Labour Force Survey data available from <http://www.hse.gov.uk/statistics/tables/occ1.htm>

2. Psychosocial Work Environment



- Decline of manufacturing and move to service economy
- PH focus moved from material to psychosocial (stress and health)
- Demand-control model (Karasek and Theorell, 1990)

Demand-Control Model



Karasek (1979)

DCS, health and health inequalities

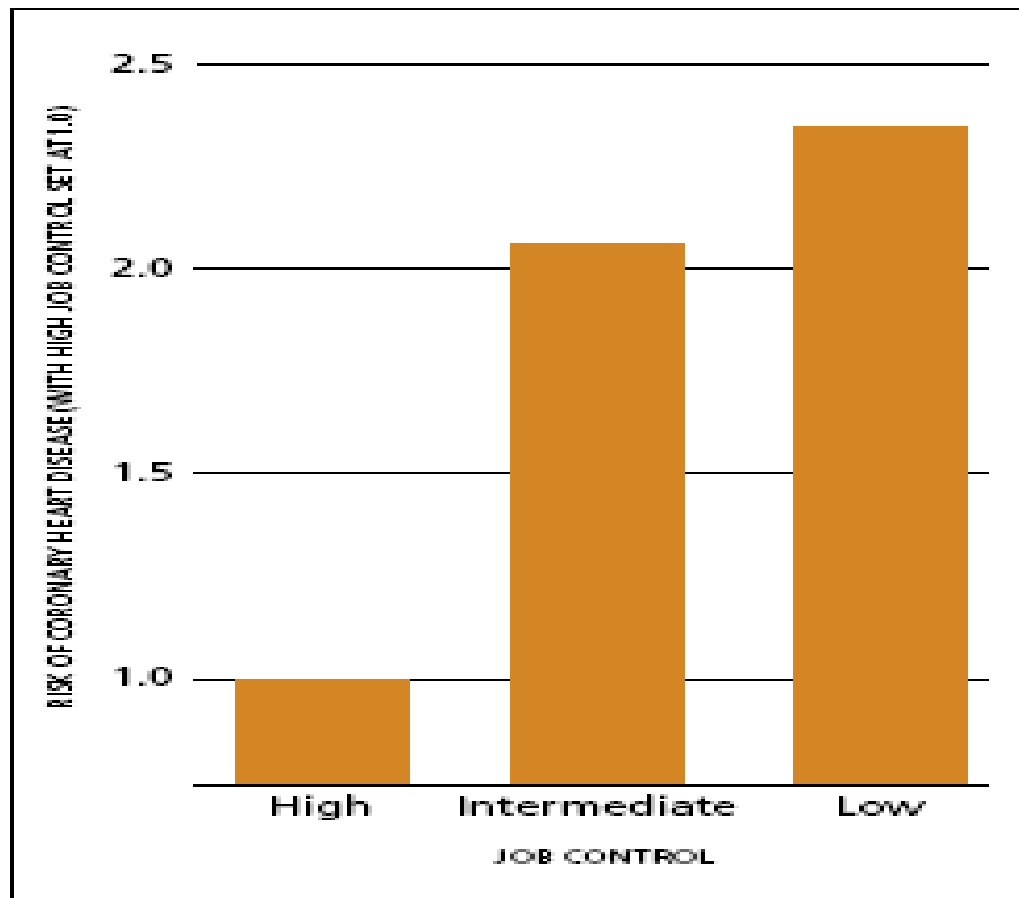
Health:

- Cardiovascular diseases
- Obesity, dose response with metabolic syndrome
- Musculoskeletal (especially LBP)
- Mental health: 33% increased risk of psychiatric disorders

Health Inequality:

- Exposure to stressful work environments higher amongst lower skilled workers
- Whitehall studies - Heart disease 50% higher in the lower grade employees.
- Adjustment for DCS reduced the inequality by 64% in men and 51% in women

Fig. 4. Self-reported level of job control and incidence of coronary heart disease in men and women



Adjusted for age, sex, length of follow-up, effort/reward imbalance, employment grade, coronary risk factors and negative psychological disposition

3. Unemployment

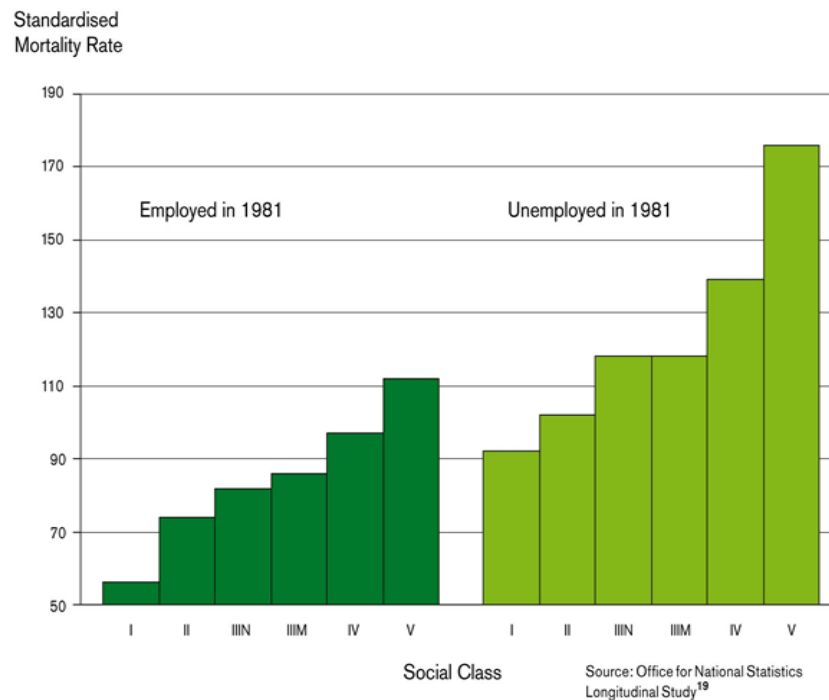
- Increased risk of poor mental health and suicide
- Higher mortality rates (1.5 to 2 fold)
- Worse self-reported health and LLTI
- Worse health behaviours
- Mechanisms – psychosocial and material
- Insecure work e.g. mortality 20% higher than permanent employees



Health Inequalities

- Lack of work is concentrated in lower socio-economic classes e.g. Census 2001 in London, 81.5% of women with a degree were employed compared to 51.8% with no qualifications.
- Adjusting for employment status reduces the social gradient by up to 81% (Popham and Bambra, 2011)
- Impact of unemployment on health greater in lower socio-economic groups

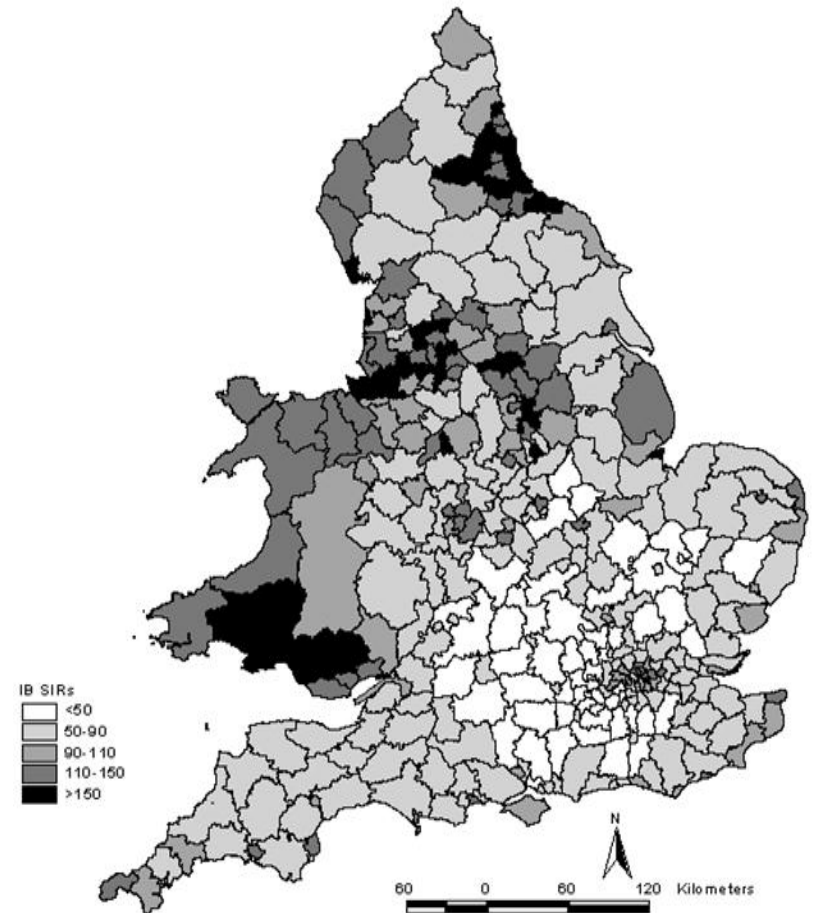
Figure 8 Mortality of men in England and Wales in 1981–92, by social class and employment status at the 1981 Census



Source: Marmot Review 2010

4. Health-related Worklessness

- Ill health can result in long-term worklessness (IB/ESA receipt)
- Out of work benefits – 5.8% OECD average, 7% in UK = 2.6m people
- Geographical variation in the UK



Health Inequalities

Health-related worklessness is unevenly socio-economically and spatially distributed

Significant educational inequalities in the employment rates of people with ill health

Employment Rate Differences (%)		2004-06
<hr/>		
Men	Low education ill v Low education healthy	-65.6
	Low education ill v High education ill	-58.7
	Low education ill v High education healthy	-68.1

5. The Comparative Geographical Perspective

Welfare State Capitalism Regimes

<u>Anglo-Saxon</u>	<u>Bismarckian</u>	<u>Scandinavian</u>	<u>Southern</u>
Ireland	Austria	Denmark	Greece
UK	Belgium	Finland	Italy
	France	Norway	Portugal
	Germany	Sweden	Spain
	Luxembourg		
	Netherlands		
	Switzerland		

Example 1: Physical

	Scandinavian countries	Other EU countries
Vibrations %	9.2	16.8
Tiring positions %	20.4	34.2
Lifting people %	7.1	6.0
Heavy loads %	13.8	19.5
Repetitive movements %	49.6	55.4
Shift work %	15.9	21.8

- A negative relationship exists between hazardous working conditions and health across Europe (especially tiring working positions)
- Prevalence of hazardous working conditions lower in Scandinavian countries (Table)
- Variation in relationship with health across Europe but no clear patterns and no weaker association in the Scandinavian countries

Variation in prevalence of working conditions

Example 2: Psychosocial

- Dragano and colleagues (2010) found that stressful work environments associated with mental ill health in older European adults (OR = 2.12)
- Likelihood of ill health greatest in the Anglo-Saxon regime (OR = 2.64) and lowest in Scandinavian (OR = 1.69)
- Welfare state type accounted for 75% of between country difference in stress
- Health effects of stressful work environments less in welfare states with higher levels of social and employment protection

Example 3: Unemployment

- Bambra and Eikemo (2009) - relationship between unemployment and health is consistent across Europe (OR 1.67 to 2.99)
- Relative inequalities between employed and unemployed were largest in the Anglo-Saxon countries (OR 2.99).
- Rodriguez (2001): UK, Germany and the USA, poor health was higher amongst unemployed people in receipt of means-tested benefits than those in receipt of entitlement benefits
- Stuckler et al (2009) – relationship between suicide rates and unemployment broken in Sweden.

Example 4: Worklessness

- Van Der Wel et al (2010) - all EU countries, people with health problems have lower employment rates than those who are healthy
- But employment rates are higher amongst those with health problems in those welfare states – the Scandinavian ones - that invest in active labour market policies (62% employed v 43% in Anglo-Saxon).

6. Concluding Comments

- Work and worklessness are important social determinants of health and health inequalities
- Geographical insights from comparative research suggest that the relationship with health varies by country
- This may be due to international differences in the economic, social, and regulatory context

