

consequences of musculoskeletal disorders. An avoidant coping strategy has been associated with an increased likelihood of sickness absence, and some evidence has been shown of increasing use of avoidant coping with decreasing social class.

**Objectives** The objective of this study is to examine the single and joint effect of musculoskeletal pain and avoidant coping on sickness absence and how this effect may be moderated by socio-economic position.

**Methods** This study was based on a prospective design including survey data from 2000 and 2006 and register data from 2007. The study population consists of a sample of Danes in their 40s and 50s free of major depression at baseline and in 2006, economically active in 2006, and reporting functional limitations due to musculoskeletal pain, N=2967. The outcome measure was retrieved from Statistics Denmark and contained information on sickness absence > 2 weeks in 2007. By multivariate logistic regression the association between self-reported musculoskeletal pain (daily vs weekly/monthly/seldom and never) and sickness absence was studied, adjusted by avoidant coping, physical exposures in work environment, gender and socio-economic position (measured by occupational social class). The joint effect of pain and avoidant coping was calculated as departure from multiplicativity and tested by product terms.

**Results** The adjusted OR between musculoskeletal pain and sickness absence was 1.76 (95% CI 1.44 to 2.15). Further analysis showed a departure from multiplicativity for the joint effect of pain and avoidant coping on sickness absence. Socio-economic position had a strong independent effect on the risk of sickness absence ( $p < 0.0001$ ). However, there was no significant moderating effect of socio-economic position on the joint effect of pain and avoidant coping.

**Conclusion** An avoidant coping strategy interacts with the perception of pain and has a strong effect on the risk of sickness absence. Although socio-economic position is significantly associated with the risk of sickness absence it did not moderate the joint effect of avoidant coping and musculoskeletal pain.

### 015 PATHWAYS TO WORK? INSIGHTS FROM A SYSTEMATIC REVIEW OF THE UK'S RETURN TO WORK INITIATIVES FOR DISABLED AND CHRONICALLY ILL PEOPLE

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**Purpose** Employment rates of chronically ill and disabled people in the UK are low (49%) and 2.7 million are on disability-related state benefits. Recent government policy has seen the introduction of a range of measures aimed at integrating them into the labour market. This paper explores what can be learned for future policy from a synthesis of a wide range of evidence evaluating these policies.

**Method** We conducted a systematic review and evidence synthesis of empirical studies reporting the employment effects and/or factors influencing the effectiveness of national-level interventions aimed at helping people into work who were not employed and were on some form of disability-related benefit. We *excluded* measures aimed at reducing short-term sickness absence, localised interventions, and those that were not wholly concerned with helping individuals move into the open labour market.

**Results** In total, 42 studies were identified that met the inclusion criteria and were included in the full review. This paper synthesises evidence from 32 studies of individual-oriented interventions; that is, ones based on the strategy of supporting and improving potential employees (as distinct from ones that aim to improve the employment environment). These covered the three major national initiatives: the *One Advisory Service*, *New Deal for Disabled People*, and

*Pathways to Work*, and initiatives packaged with them (eg, *Return to Work Credit*, *Permitted Work Rules*, *Condition Management Programme*). There was evidence that personal advisors and individual case management in these schemes helped some participants back to work. However, these results were biased by widespread selection into these programmes of more work-ready claimants. Qualitative studies revealed the time pressures and requirements to fill job outcome targets that influenced the advisors' selection of claimants. Claimants were concerned about reduction in income and benefit sanctions that advisors could impose. This worked against the building up of mutual trust needed for the individual case management to work effectively.

**Conclusions** Selection into these programmes of more work ready claimants creates difficulties in judging to what extent the employment effects reported in the quantitative studies derive from the programmes or from the motivations of the individuals. We consider the implications for recent and future UK reforms of the finding that those furthest from the labour market need long-term engagement based on mutual trust to help them move towards work.

### 016 BANKING CRISES AND MORTALITY DURING THE GREAT DEPRESSION: EVIDENCE FROM US URBAN POPULATIONS, 1929–1937

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**Objectives** Previous research has suggested that the economic turmoil during the Great Depression led to significant improvements in public health. However, these studies have relied on highly aggregated national data (using less than 25 data points), and employed intermediary measures of economic change, such as employment and Gross Domestic Product. We use a new historical data set of US mortality rates and bank suspensions to analyse both the immediate and underlying causes of mortality change during Great Depression.

**Design** Cause-specific mortality rates covering 114 US cities in 36 states were taken from the US Bureau of the Census. Bank suspensions data were taken from the Federal Deposit Insurance Corporation. Epidemiologic analysis was performed of the immediate causes of fluctuations in urban mortality rates weighted by population size. Dynamic fixed effects models were used to assess the immediate and delayed effects of bank suspensions on mortality.

**Setting** 114 US cities and 36 US states, 1929–1937.

**Participants** NA.

**Main outcome measure** Age-standardised all-cause and cause-specific mortality rates

**Results** Reductions in all-cause mortality rates (about 10% between 1929 and 1932) were attributable to declines in death rates due to pneumonia (26.4% of total), influenza (13.1% of total), and respiratory tuberculosis (11.2% of total), while death rates increased from heart disease (19.4% of total), cancer (8.1% of total) and diabetes (2.9%). Of these main causes of mortality changes, only heart disease plausibly relates to contemporary economic shocks. A higher rate of bank suspensions was associated with contemporary higher suicide rates ( $\beta = 0.32$ , 95% CI 0.24 to 0.41) but lower death rates from motor vehicle accidents ( $\beta = -0.18$ , 95% CI  $-0.29$  to  $-0.07$ ); no effect was observed for other causes of death studied. There was no evidence of substantially differing delayed effects.