

COMMENTARY

Feeling the pressure: work stress and mental health

ABRAHAM REICHENBERG* AND JAMES H. MACCABE

Department of Psychological Medicine, Institute of Psychiatry, King's College London, UK

Depression and anxiety are the most common mental disorders, affecting adults of working age, and the prevalence of these disorders appears to be rising, at least in Western countries. Annual deaths from suicide total almost 1 000 000 worldwide (Goldsmith *et al.* 2002), and depression is a robust risk factor for suicide. At the same time, there is increasing evidence that working conditions are becoming more stressful, or at least are perceived as such, with up to 40% of workers reporting stress at work (European Foundation for the Improvement of Living and Working Conditions, 2006).

High job demands have consistently been associated with psychological distress and depression (Bromet *et al.* 1992). However, with only few exceptions (e.g. Wieclaw *et al.* 2005), much of the previous research in this field has suffered from methodological shortcomings or been of limited relevance to mental health professionals. First, most studies have focused on relatively minor symptoms of distress, which would not necessarily lead to clinically significant psychiatric conditions or suicide. Second, confounding by socioeconomic status has not always been adequately controlled. Third, individuals vary markedly in their propensity to report psychological distress. This can lead to spurious associations between self-reported job stress and psychiatric symptoms, especially in cross-sectional studies. Fourth, it is often difficult to exclude reverse causality: individuals with mental health problems might be less adept at avoiding stressful working environments than healthy individuals.

This issue of *Psychological Medicine* presents two prospective cohort studies (Agerbo *et al.* and Melchior *et al.*) on the relationship between occupation distress and mental health, both of which overcome many of the problems of earlier studies. The studies use similar methodologies but address different aspects of the question on the relationship between job stress and mental health.

Using the Dunedin birth cohort, Melchior *et al.* (2007) documented an association between work stress and rates of depression and anxiety in young adults. Crucially, they capitalized on the prospective study design, demonstrating that working in high-demand jobs (i.e. jobs with excessive workload, or extreme time pressures) was associated with the onset of new depression and anxiety in individuals without any pre-employment history of psychiatric disorders. Overall, around 45% of new cases of depression and anxiety in the cohort were attributable to high job demands.

Following their previous work documenting an association between depression and anxiety and occupation (Wieclaw *et al.* 2005), Agerbo *et al.* (2007) used population registers which contain information about the entire Danish population to investigate the association between occupation and suicide. Initially demonstrating that higher suicide rates were associated with lower overall job status, further analyses demonstrated that most differences in suicide risk between occupations were accounted for by differences in income and employment status.

The two most striking exceptions were the medical and nursing professions, which suffered the highest suicide rates of all 55 occupations examined. Increased risk of suicide among medical professionals has been quite consistently reported (Platt & Hawton, 2000;

* Address for correspondence: Dr A. Reichenberg, Department of Psychological Medicine, Institute of Psychiatry, King's College London, UK.

(Email: avi.reichenberg@iop.kcl.ac.uk)

Schernhammer, 2005). Several studies have suggested that the ready availability of lethal means has a strong influence on of suicide rate (Bennewith *et al.* 2007). In the study by Agerbo and colleagues, suicide by medicines in doctors was increased around 13 times, suggesting that easy access to drugs, combined with expertise in pharmacology, may explain some of the excess. However, even when deaths by medicines were excluded, suicide rates in doctors and nurses were still comparable to those in unskilled occupations, suggesting that additional factors may be operating.

Despite the obvious methodological strengths of these studies, neither proves causality. It cannot be determined whether the higher rates of depression/anxiety or suicide reported by these studies arise as a result of the characteristics of jobs, the genetic or personality characteristics of the people who follow particular careers, or a combination of the two. Studies of gene-environment interactions in this field are crucial for better understanding aetiological processes.

Depression and anxiety are very common disorders, and are a major cause of morbidity, poor quality of life, social impairments and lost work productivity. Work stress also appears to be very common, so the population-attributable fraction of mental disorders (i.e. the proportion of reduction in the risk of the disease/s) related to modifying work stress is likely to be very large. Work stress can be reliably measured, and is potentially modifiable, either by changing job characteristics, or by avoiding appointing the most vulnerable individuals to the most stressful jobs. There may, therefore, be opportunities for primary prevention or earlier detection of stress-related psychiatric disorder in the workplace.

The public health implications of the findings of Melchior and colleagues may extend to other disorders as well. High psychological stress has been associated with the development of a wide range of health outcomes, including cardiovascular disease (Hemingway & Maramot, 1999). There is a well-documented, yet not

well understood, link between depression and cardiovascular disease (Hemingway & Maramot, 1999; Frasure-Smith & Lesperance, 2003).

While both studies suggest that the characteristics of a job influence the risk of psychiatric problems, it is important to bear in mind that having a job at all is probably beneficial for most people's mental health. In the study of Agerbo and colleagues, individuals who were unemployed had higher suicide rates than any occupation apart from medicine.

Declaration of Interest

None.

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