Reviewer's report

Title: The impact of employee rank and work stress on mental health and GP service use: an analysis of a sample of Australian government employees.

Version: 1 Date: 6 July 2004

Reviewer: Jane Ferrie

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

This paper sets out to examine the associations of employment grade and work stress with mental health indicators and GP use among Australian Government employees. The authors find no employment grade gradient in any health or well-being measure with the exception of positive affect, but strong evidence of steep grade gradients in all the characteristics of the work environment measured. Models adjusted for work characteristic showed very few associations between employment grade and health outcomes, while models adjusted for employment grade show strong associations between characteristics of the work environment and health. Several of the study’s findings are counter-intuitive so it is very important that the methods, analyses and results are described with absolute clarity. At present the manner in which they are presented at present makes it difficult for the reader to determine exactly what s/he is seeing.

While most previous studies do find higher rates poor mental health, impaired functioning and lowered well-being in lower socioeconomic groups, there are studies some that have found no social gradient in outcomes such as anxiety and depression. Initially therefore the most surprising finding from this study is the absence of an employment grade gradient in any of the health outcomes measured. However, on further examination this finding is less surprising. Judging from Table 1 the Australian Public Service appears to have an existing employment grade structure. For some reason the authors do not use this, but instead construct their own ranking measure. This ranking measure was based on skill and expertise in addition to level of responsibility and appears from Table 1 to be highly correlated with education. In Table 2 we see that this ranking measure demonstrates strong associations with all the characteristics of the work environment but not with the health measures in Table 3. We do not know whether the analyses in either table are adjusted for any of the sociodemographic measures annotated in the footnote beneath Tables 4 and 5. Certainly if the analyses in Table 3 were adjusted for these variables one would not expect to observe much of an employment grade gradient in health. Table 1 has already shown that the ranking score is highly correlated with education and life events are much more common among those of lower economic status.

If the findings presented in Table 3 are unadjusted analyses or age-adjusted analyses the authors need to discuss at some length why employment grade was unrelated to either mental or physical health in their data. At present they merely indicate that this may be a numbers problem. It would be helpful to include a measure of self-rated health in their analyses as 806 participants should be sufficient to demonstrate a gradient in this measure if one exists.

The household responsibility score seems problematic. It is not a score I am familiar with and the
authors provide no reference either for the score or for their assertion that it has the potential to modify an individual’s assessment of work characteristics. It would also be helpful for the reader to be provided with the distributions of all the sociodemographic variables across the employment grades.

In the Methods section the work characteristics are defined only as score and yet in Tables 4 and 5 they appear to have been used as categorical variable. The authors need to clarify how these were defined. It would also be helpful if the authors could explain how the reader should interpret the \( R^2 \) statistic for incident rate ratios.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Most of the information in paragraph 3 of the Background should be moved to the Methods section.

Sentences 1 and 3 of paragraph 1 under the sub-heading ‘Subjects’ seems to contradict each other. Paragraph 2, line 3, the sample for the Whitehall II study included all employees in 20 government offices regardless of profession.

In the Discussion the authors assert that ‘findings reporting sex differences in the health consequences of job insecurity have mostly concerned measures of physical health. There is actually a lot of evidence in the literature on associations between job insecurity and mental health, much of it analyses separately by sex. A systematic review by Platt, Parvis and Akram for the European Foundation and a review by De Witte in the European Journal of Work and Organisational Psychology would be good places to start.

Again it is untrue that ‘the impact of lower job security on GP service use has not been previously reported’. Beale and Nethercott studied this extensively in a seminal series of papers covering the effects of a factory closure on health service use in the UK in the early 1980s.

Although they admit that longer working hours were not a barrier for women seeking healthcare, the authors nonetheless suggest that ‘more job control and working fewer hours are both factors that could give men more opportunity to set aside time for a GP visit.’ In suggesting this they ignore the well-documented differential self-referral rates between the sexes as the more obvious explanation.

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Discretionary Revisions (which the author can choose to ignore)

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No
Declaration of competing interests:

None