

Psychosocial Working Conditions in Britain in 2008

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SUMMARY

Introduction

This report presents analysis of 2008 data from an annual series of surveys on psychosocial working conditions which began in 2004. These surveys were set up to monitor changes in the psychosocial working conditions of Demand, Control, Managerial Support, Peer Support, Role, Relationships and Change in British workplaces. These are the working conditions which HSE is aiming to improve amongst British workers by means of employers implementing its Management Standards approach to tackling work-related stress, launched in November 2004. Although HSE has been actively promoting the use of the Management Standards since this launch, a sustained period of encouragement towards uptake began in mid 2006 and focused on target industries with the highest rates of work stress-related ill-health and absence. These target groups, defined using the Standard Industrial Classification (SIC) system, are Financial Intermediation (SIC Section J); Public Administration & Defence (SIC Section L); Education (SIC Section M); and Health & Social work (SIC Section N).

Results

The survey results from 2004 to 2008 indicate that psychosocial working conditions have not generally changed over this period to any great extent, although the score on the change scale shows a significant upward trend (i.e. an improvement). In the 2007 report it appeared that an improvement in population level working conditions may be emerging, however the 2008 results do not show a continuation of that trend. There is no longer a downward trend in the number of employees reporting that their job is very or extremely stressful and little change in the number of employees aware of stress initiatives in their workplace or reporting discussions about stress with their line managers.

Conclusions

Psychosocial Working Conditions for British employees have not generally significantly changed between 2004 and 2008. The predicted improvement in working conditions as a result of HSE's roll-out of the Management Standards for work-related stress has not materialised as yet, and the number of workers reporting that their job is highly stressful is no longer steadily decreasing. The lack of impact to date of the Management Standards could reflect the long latency between organisations first implementing the process and benefits being realised. Equally, with so many other economic and social factors affecting worker perceptions of their working conditions, any effect may be masked. Only in combination with other evidence can the effects of the Management Standards be better understood.

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1. INTRODUCTION

This report provides results from the 2008 survey of psychosocial working conditions in Great Britain, the fifth in an annual series of surveys. It provides analysis of the 2008 data and tracks the changes from the corresponding surveys in 2004, 2005, 2006 and 2007. It aims to assess changes in the 6 key areas of psychosocial working conditions, namely demand, control, support, role, relationships and change, as covered by HSE's Management Standards for work-related stress. It also aims to compare changes in industries targeted with greater HSE promotion of the Management Standards against those where currently HSE promotion is less active. Results will be used to inform the assessment of current HSE activities on work-related stress.

Full details of the rationale for these surveys can be found in past survey reports published on the HSE website (HSE, 2004; HSE & HSL, 2005; HSE, 2006c; Webster, Buckley and Rose, 2007). Information on the Management Standards for work-related stress including details of how the stress indicator tool questions used in this survey were developed are also published on the HSE website (HSE, 2006a).

2. METHODOLOGY

2.1 Omnibus survey

In 2008 HSE commissioned a series of questions in two of the Office for National Statistics (ONS) Omnibus Surveys, carried out in March and April 2008. The Omnibus survey is a multi-purpose survey developed by the ONS for use by Government departments and other public bodies. It is a vehicle for questions on topics too brief to warrant a survey of their own and also for topics of immediate interest. Since April 2005, interviewing has been carried out every month (previously the survey was run in two months out of every three – eight months of the year in all). Each month's questionnaire covers a variety of modules each sponsored by a Government department (or public body) and a core of demographic questions. The number of questions contained within a module is limited by ONS, and each sponsor is limited to a single module within any given survey. Due to these restrictions, HSE ran questions in consecutive (March and April) Omnibus surveys.

2.1.1 Sample

The Omnibus survey sample is a random probability sample stratified by region, the proportion of households where the household reference person is in the National Statistics Socio-economic Classification (NS-SEC) categories 1-3 (i.e. employers in large organisations; higher managerial occupations; and higher professional employees/self-employed), and the proportion of people who are aged over 65 years. The Office for National Statistics website provides a fuller description of the stratification (ONS, 2006). The Royal Mail's Postcode Address File (PAF) of 'small users' provided the sampling frame used. The PAF contains the addresses of approximately 27 million private households in the UK, which receive fewer than 50 items of mail per day, and is the most complete and up to date address database in the UK.

Until March 2005, the Omnibus survey was based upon 100 postal sectors, and within each sector 30 addresses were selected at random. However, from April 2005, when the Omnibus survey became a monthly survey rather than running in 8 months of the year, the survey consisted of 67 postal sectors, with 30 addresses selected at random from each of these sectors. The postal sectors were selected with probability proportionate to size (number of addresses within the postal sector).

In the cases where an address contained more than one household, the interviewer used a standard ONS procedure to randomly select a single household. Within households containing more than one adult member (aged 16 years or above), a single participant was selected using a Kish Grid. The interviewers endeavour to interview that person – proxy interviews are not taken.

2.1.2 Weighting

Weighting factors are applied to Omnibus data to correct for unequal probability of selection caused by interviewing only one adult per household, or restricting the eligibility of the module to certain types of respondent.

2.1.3 Fieldwork

All interviews are carried out face to face by members of the general field force of interviewers trained to carry out National Statistics surveys. Advance letters are sent to all addresses, prior to the interview, giving a brief account of the survey. The interviewing period starts in the first week of the calendar month and continues for the duration of the month in question. Interviewers call at all the selected addresses

unless a refusal has been made beforehand in response to the advanced letter. The interviewer makes at least three calls at an address at different times of the day and week before coding the household as a non-contact. After the field period, a proportion of the non-contacts and refusals are sent to the Telephone Unit who attempts to obtain an interview over a four-day period.

2.2 Questionnaire

The psychosocial working conditions questions used consisted of all questions developed as part of the HSE Management Standards indicator tool. Some details of the development of this tool are given in Cousins et al (2004) with full details in Clarke (2004). The indicator tool comprises 7 separate scales of Demand, Control, Managerial Support, Peer Support, Role, Relationships and Change that map onto the 6 Management Standards. Additional questions to identify eligible respondents (see section 2.3.1 below) and to assess current activity in respect to the management of stress were also included. For reasons stated below, the questionnaire had to be split into two separate modules. These modules are shown in appendix B.

Along with the module on psychosocial working conditions, each Omnibus survey also contained other modules and a core set of demographic and occupational questions. In Omnibus surveys, the number of questions per module are strictly limited and organisations are only permitted one module in each survey month. Due to these restrictions the psychosocial working conditions questions were split into two modules; (i) role, relationships and change questions and (ii) demands, control and support questions; these modules were included in the March and April surveys respectively. However, both HSE modules contained key questions termed first pass questions, that were thought to best represent each of the six standards.

An error in the implementation of the April 2005 Omnibus survey resulted in the rerunning of the March module for that year. Consequently little information on demand, control and support are available for 2005.

2.3 Response Rate and numbers sampled

The response rate is calculated as the number of achieved interviews as a percentage of the eligible sample. The response rates for the 6 survey modules included in this analysis are shown in Table 1.

Table 1. Response rates for Omnibus survey modules

Module	Selected addresses	Ineligible addresses	Eligible addresses	Refusals	Non-contact	Interviews achieved	Response rate
March 2004	3000	225	2775	707	317	1751	63%
April 2004	3000	222	2778	742	350	1686	61%
March 2005	3000	238	2762	739	310	1703	62%
April 2005*	2010	191	1819	440	127	1251	69%
March 2006	2010	195	1815	470	144	1220	66%
April 2006	2010	185	1825	434	103	1295	71%
March 2007**	2010	163	1667	453	134	1088	65%
April 2007**	2010	271	1664	483	187	1083	62%
March 2008	2010	190	1818	549	153	1087	60%
April 2008	2010	179	1830	538	123	1156	63%

* Note a change in ONS methodology from April 2005 reduced the number of selected address by just under 1000

** Note that in March 2007, 180 households were unallocated to interviewers due to limited resources and in April 2007, 233 households were unallocated for the same reason.

2.3.1 Responses to HSE modules

HSE's psychosocial working conditions modules were administered to a sample from the population of all current employees and those currently self-employed who worked like employees. This was because the questioning was based largely on work-relationships and structures that would be of little relevance to self-employed people who worked largely on their own with control over their work. Those eligible to answer HSE modules were those in paid employment who stated that they were classified as employees or those who were self-employed and reported that they worked like an employee.

Numbers eligible to answer HSE questions by Module are shown below in Table 2.

Table 2. Numbers eligible to answer psychosocial working conditions questions

Module	Eligibility for psychosocial working conditions questions		Total interviews achieved for module
	Eligible	Ineligible	
March 2004	891	860	1751
April 2004	836	850	1686
March 2005	845	858	1703
April 2005*	631	620	1251
March 2006	606	614	1220
April 2006	639	656	1295
March 2007*	562	526	1088
April 2007	507	576	1083
March 2008	503	584	1087
April 2008	566	590	1156

* Note changes in ONS methodology from April 2005 and from March 2007 reduced the number of selected address and hence numbers asked HSE questions

2.4 Analysis

2.4.1 Derivation of Scale scores

Working conditions questions derived from HSE’s indicator tool represent 7 scales of Demand, Control, Managerial Support, Peer Support, Role, Relationships and Change. One of two 5-point Likert response scales were used for all psychosocial working conditions questions. These were either a 5-point balanced frequency scale from Never to Always, or a 5-point balanced scale of agreement from Strongly Disagree to Strongly Agree, with responses coded 1 to 5 respectively. However, in derivation of scores for the scales the numerical values for the question items were realigned so 1 always represented the most unfavourable working conditions and 5 the most favourable. This resulted in question items in the demand and relationships scales having their scoring reversed as the “strongly agree” and “always” responses for questions in these scales represent the most unfavourable working conditions.

The overall score for each of these seven scales was calculated for each respondent by adding the item scores for each question in that scale answered and dividing by the total number of questions answered in that scale. In this way a mean score standardised to a range between 1 and 5 was derived for each of the seven scales representing the standards. This had the effect of standardisation of scale scores

regardless of the number of items in the scale and treating missing items as being the equivalent of the mean of other items in the scale for that individual respondent.

2.4.2 Additional questions on stress

All the interviewees were asked three additional questions about stress. The first asked the interviewee how stressful they found their job to be and was answered using a balanced 5 point Likert scale, with responses ranging from 1 = “Not at all stressful” to 5 = “Extremely stressful”. The remaining questions asked about initiatives to reduce stress in the workplace and discussion of job stressors with managers and required yes/no/don't know responses. These later questions were used to provide a surrogate indicator of visible employer activity on stress. The question on job “stressfulness” has been used elsewhere and the responses “very” and “extremely” stressful were identified as indicators of high job stress (Smith *et al.* 2000).

2.4.3 Derivation of target industry variables

HSE's stress programme has targeted the industry sectors of Financial Intermediation; Public Administration & Defence; Education; and Health & Social work, corresponding to sections J, L, M and N of the Standard Industrial Classification (SIC) of Economic Activities, ONS (2003). These industries were targeted because they had, and continue to have, the highest incidence rates of stress and associated sickness absence (HSE, 2006b).

Prior to 2008, the core module questions in the Omnibus Survey contained no industry information although they did contain information on occupation classified according to four digit Standard Occupation Classification (SOC). Recoding from the SOC codes into top level SIC codes was undertaken each year using a probability based method described fully in each of the previous Psychosocial Working Conditions reports, for example Webster, Buckley and Rose (2007). In 2008, SIC codes were recorded directly for the first time and these have been used to assign respondents to industry sectors. Thus there is a discontinuity; however, it is believed the effect of this change will be negligible.

Statistical Techniques

Data files from the surveys in 2004, 2005, 2006, 2007 and 2008 received were combined using SPSS version 9 (SPSS,1999) and converted to Stata format. All analysis was undertaken in Stata version 8 (StataCorp, 2003).

An extension of the Wilcoxon rank-sum test was used as a non-parametric trend test across ordered groups to assess trends over more than two time points (Cuzick, 1985). When only two time points are under consideration, a Wilcoxon rank-sum test or Mann Whitney U-test was used (Wilcoxon, 1945; Mann and Whitney, 1947). Frequencies, proportions, and means with their appropriate confidence intervals were produced using the appropriate survey commands in Stata using the analytical weights provided by ONS (StataCorp, 2003).

3. RESULTS

3.1 Trends for all employees

3.1.1 Distribution of Role scores for all employees

The distribution of the scale score for Role by year and the change in overall mean score for Role by year is shown in Figures 1 and 2 below.

Figure 1. Distribution of Role score by study year

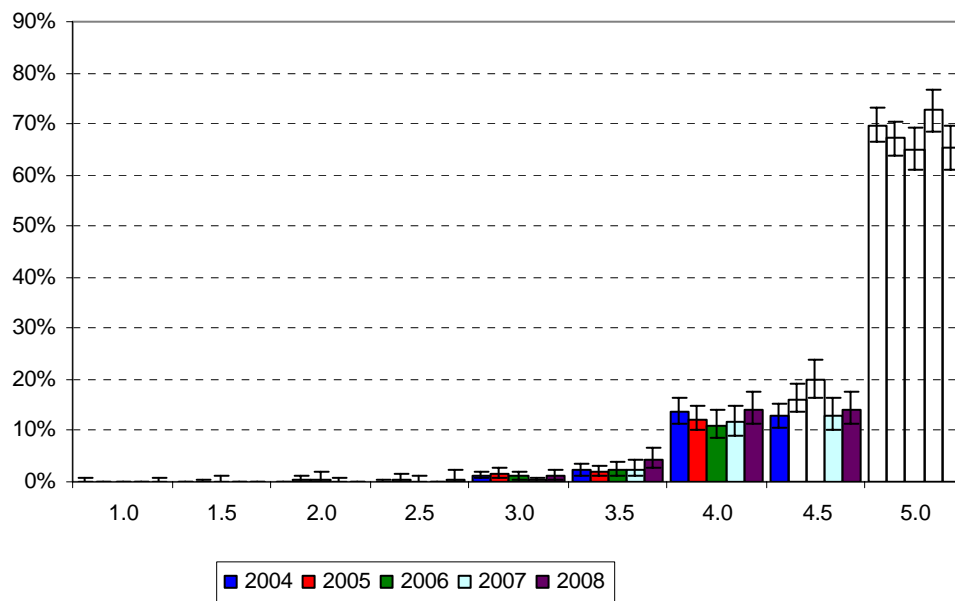
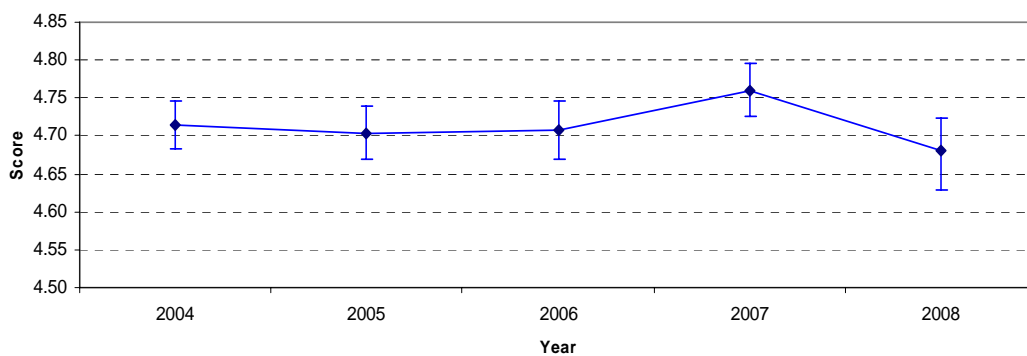


Figure 2. Mean Role score by year



Analysis suggests no significant trend across the four survey years in the mean score for Role ($p=0.74$). The mean score is marginally worse in 2008 than it was in 2007 ($p=0.07$).

3.1.2 Distribution of Relationship scores for all employees

The distribution of the scale score for Relationships by year and the change in overall mean score for Relationships by year is shown in Figures 3 and 4 below.

Figure 3. Distribution of Relationships score by study year

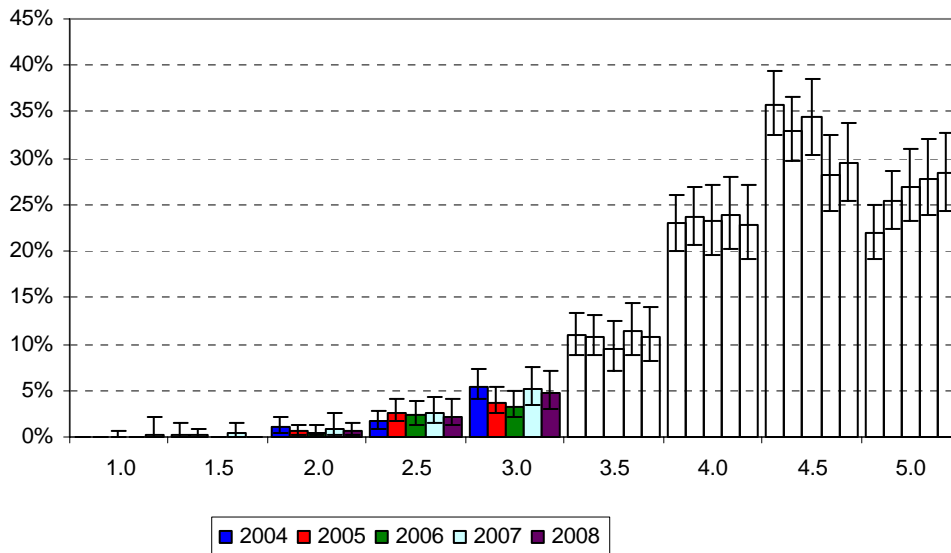
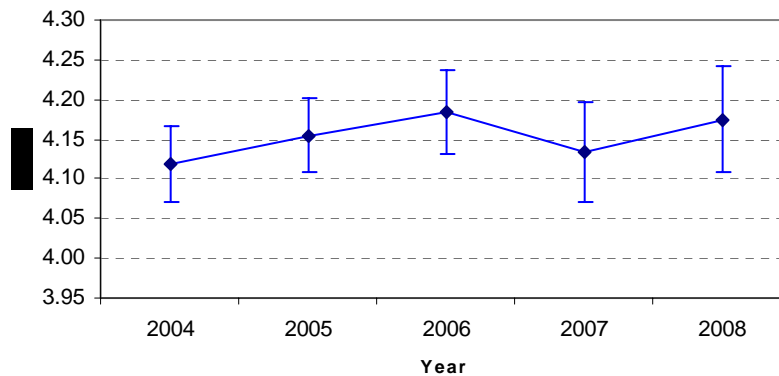


Figure 4. Mean Relationships score by year



Analysis suggests no clear trend in relationships at work between 2004 and 2008 among all British employees ($p=0.08$). Improvement between 2007 and 2008 was not significant ($p=0.35$).

3.1.3 Distribution of Change scores for all employees

The distribution of the scale score for Change by year and the change in overall mean score for Change by year is shown in Figures 5 and 6 below.

Figure 5. Distribution of Change score by study year

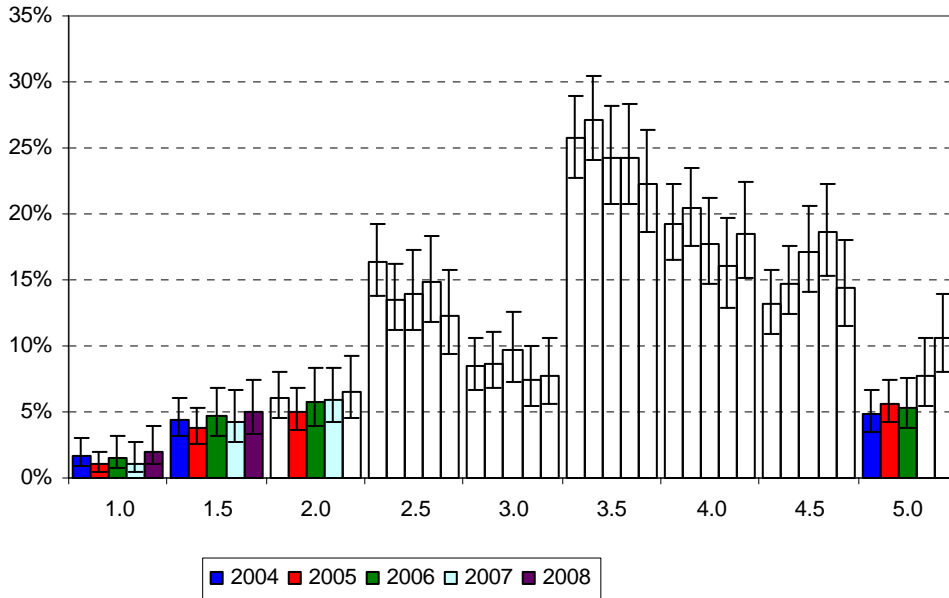
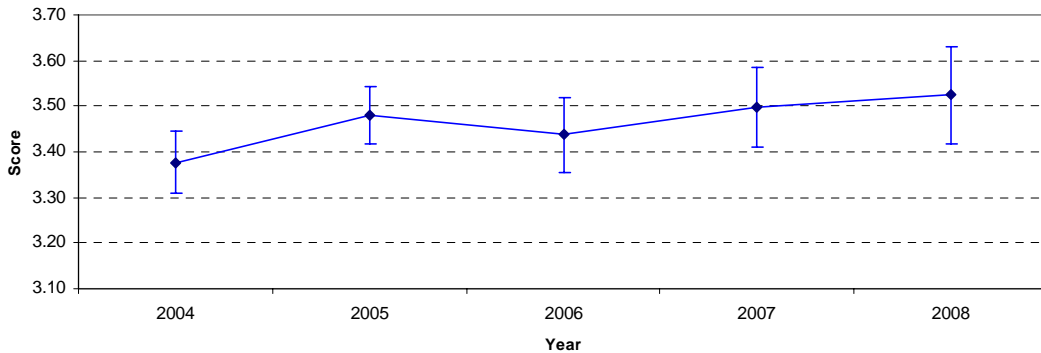


Figure 6. Mean Change score by year



Analysis suggests a significant upward trend across years in the mean score for Change among all employees in Britain ($p=0.03$). The single increase over the past twelve months was not significant ($p=0.72$).

3.1.4 Distribution of Demands scores for all employees

The distribution of the scale score for Demands by year and the overall mean score for Demand by year are shown in Figures 7 and 8 below.

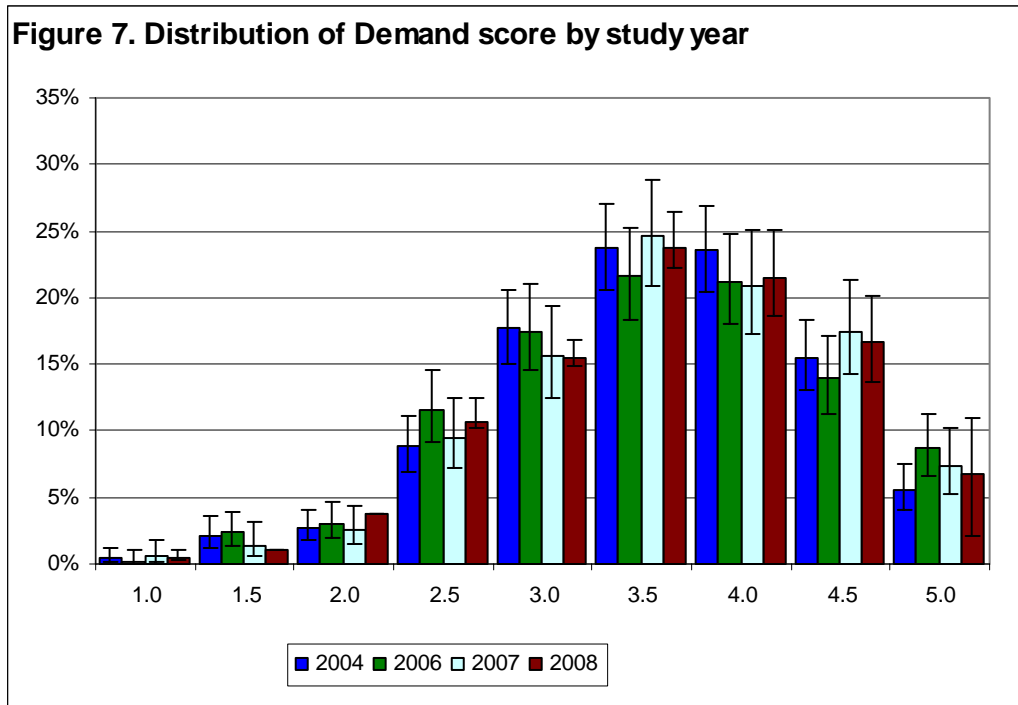
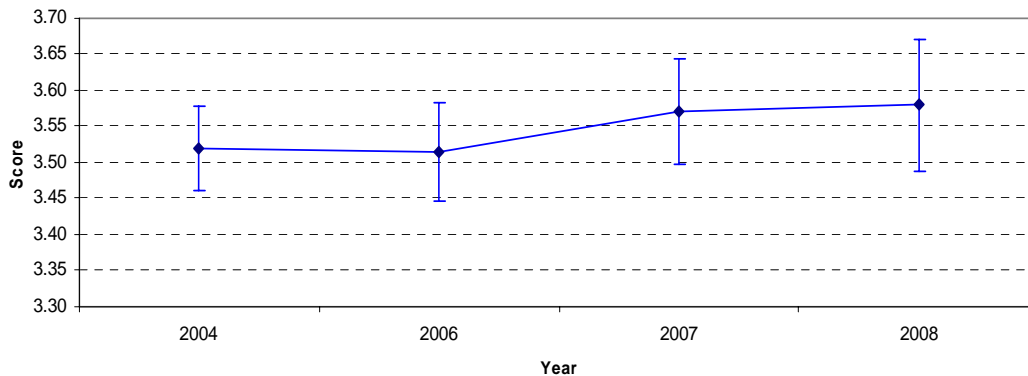


Figure 8. Mean Demand score by year



Analysis suggests no significant trend in Demand score among British employees between 2004 and 2008 ($p=0.48$). Nor is the increase between 2007 and 2008 statistically significant ($p=0.52$).

3.1.5 Distribution of Control scores for all employees

The distribution of the scale score for Control for by year and the overall mean score for Control by year are shown in Figures 9 and 10 below.

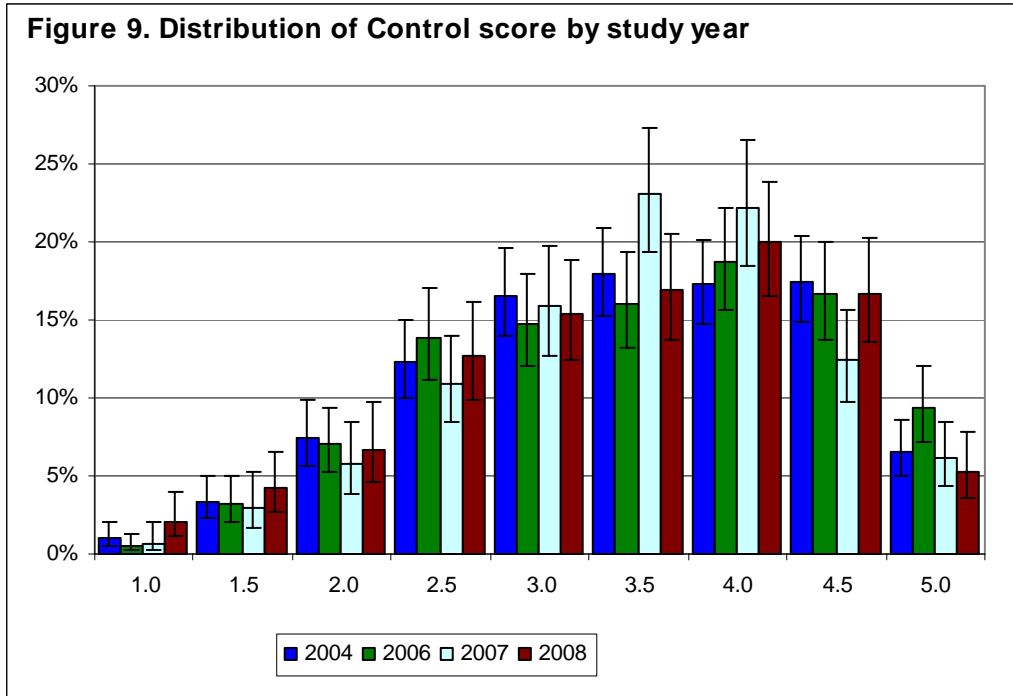
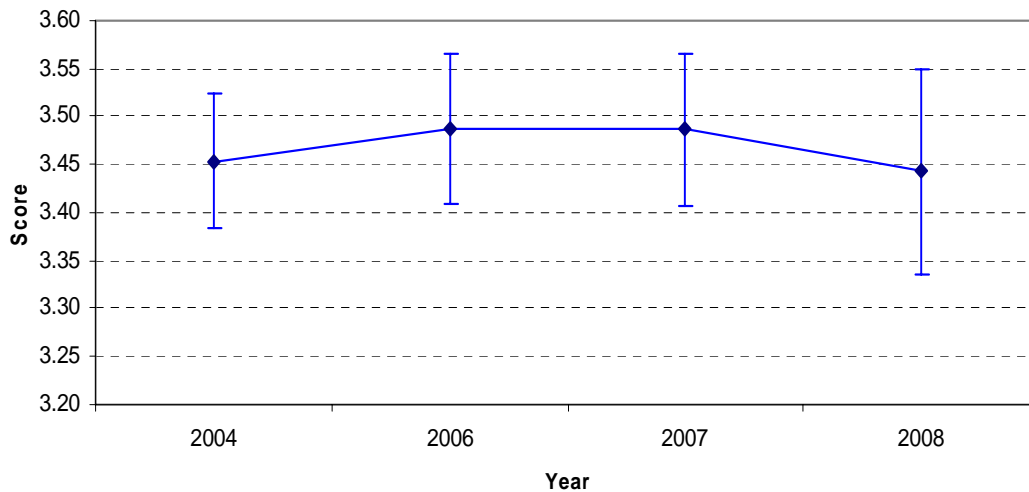


Figure 10. Mean Control score by year



Analysis suggests no significant difference in Control score among British employees between 2004 and 2008 ($p=0.82$). There was no significant difference between mean scores in 2006 and 2007 ($p=0.46$).

3.1.6 Distribution of Managerial Support scores for all employees

The distribution of the scale score for Managerial Support by year and the overall mean score for Managerial Support by year are shown in Figures 11 and 12 below.

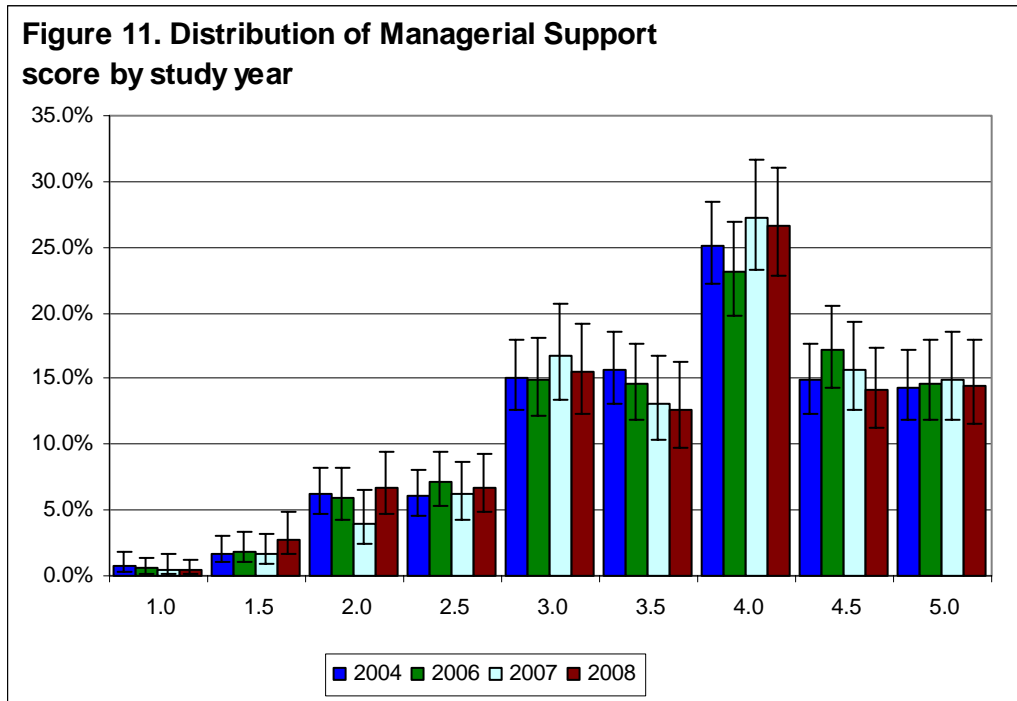
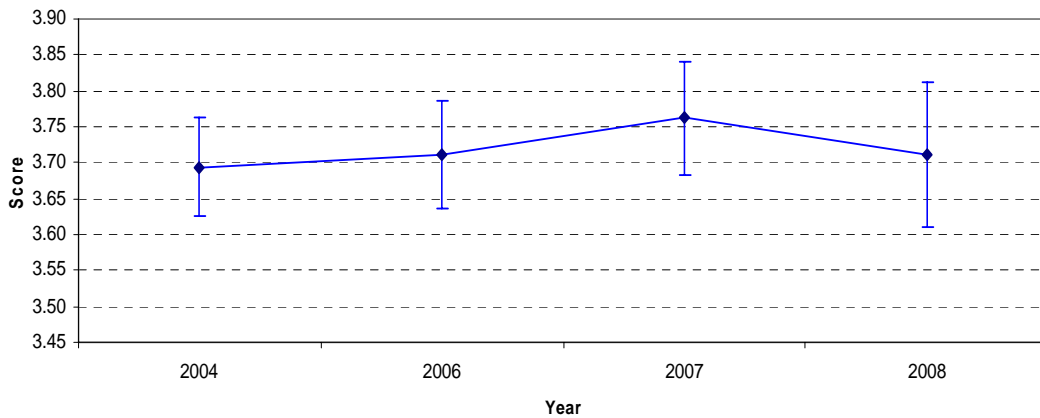


Figure 12. Mean Managerial Support score by year



Analysis suggests no significant difference in Managerial Support score among British employees between 2004 and 2008 ($p=0.27$). The decrease in mean score between 2007 and 2008 was not significant ($p=0.34$).

3.1.6 Distribution of Peer Support scores for all employees

The distribution of the scale score for Peer Support for by year and the overall mean score for Peer Support by year are shown in Figures 11 and 12 below.

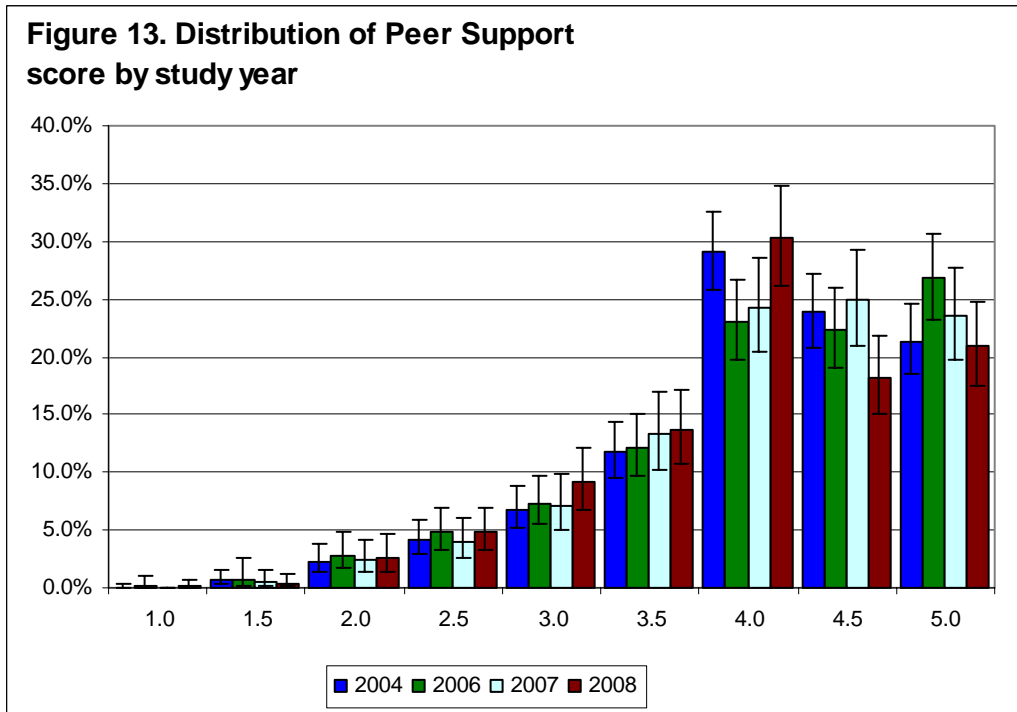
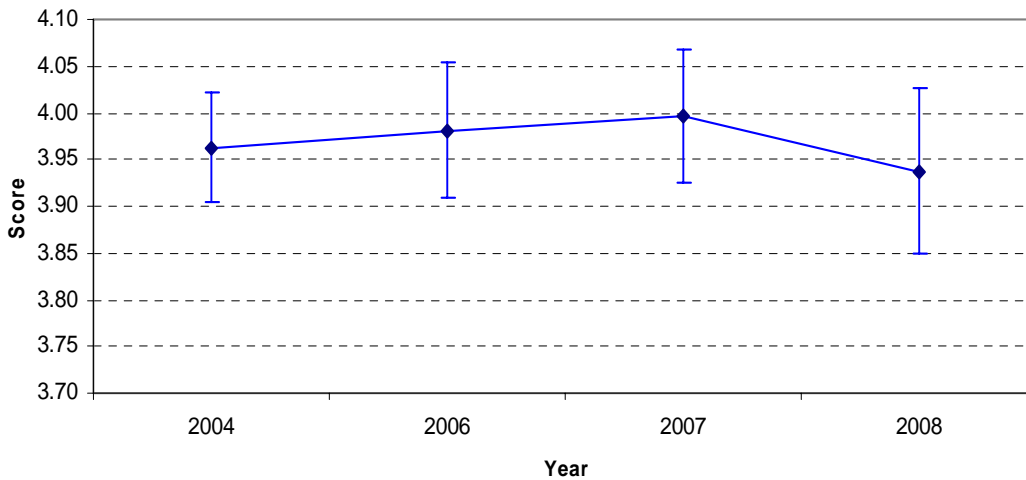


Figure 14. Mean Peer Support score by year

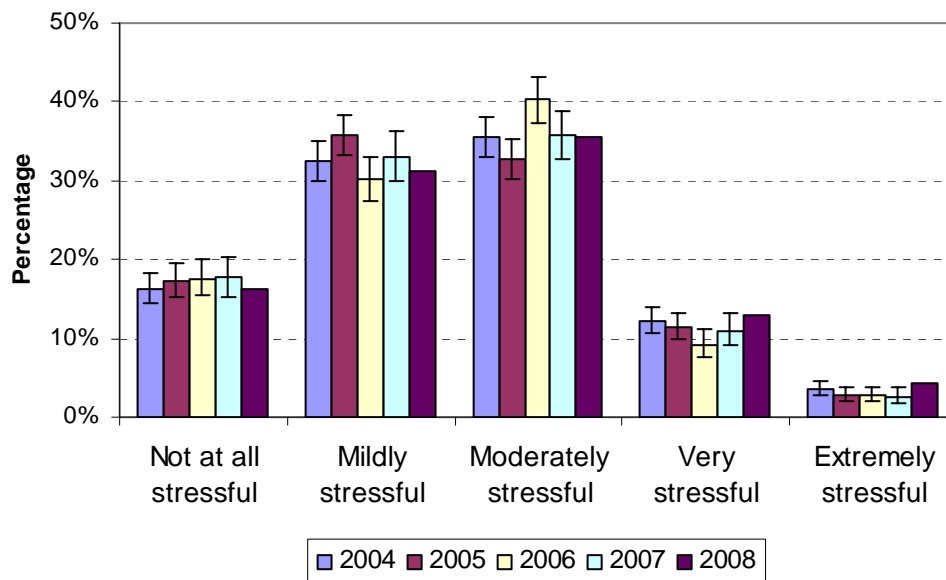


Analysis suggests no significant difference in Peer Support score among British employees between 2004 and 2008 ($p=0.11$). The decrease in mean score between 2007 and 2008 was not statistically significant ($p=0.97$).

3.1.7 Trends in job stressfulness for all employees

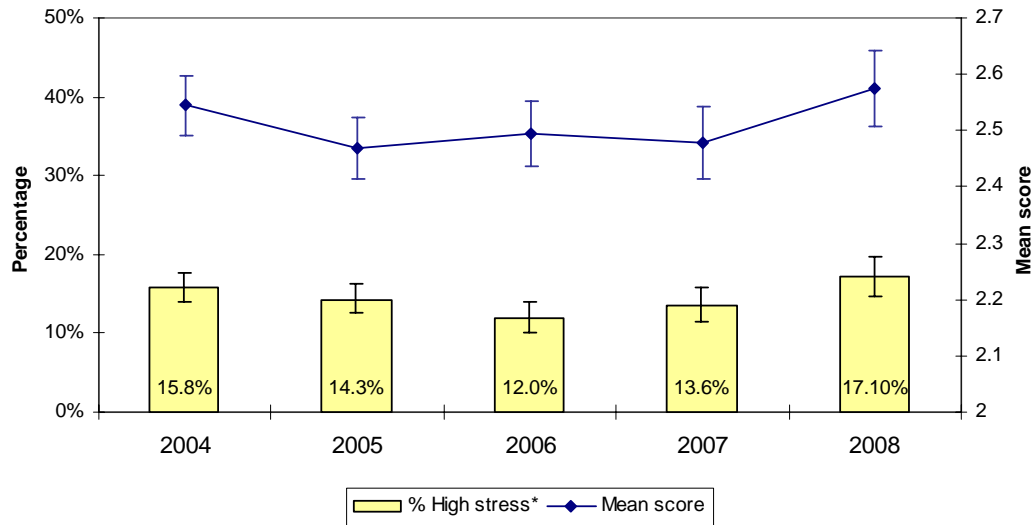
Respondents on both survey modules were asked to rate how stressful they felt their job was, on a 5-point balanced Likert scale from *Not at all stressful* to *Extremely stressful*. Figure 15 below shows the distribution of scores in response to this single question by year. In 2008 17.1% (95% CI 14.7%, 19.7%) of respondents reported that they find their job either very or extremely stressful. Those reporting in either of these categories were considered to be under high work stress according to Smith *et al.*, (2000), and this question and categorisation has been subsequently used as a crude single item surrogate indicator of job stressfulness. This year's is the highest figure reported in the five surveys between 2004 and 2008.

Figure 15. In general how do you find your job?



There is no significant trend over the five year survey period ($p=0.57$), although prior to 2008 there was a significant downward trend between 2004 and 2007 ($p=0.02$). A trendline is shown in Figure 16, along with the mean score on the job stressfulness scale.

Figure 16. Mean of Job stressfulness and percent with high stress* by year



*High job stress refers to those who indicated that their job was extremely or very stressful

3.1.8 Initiatives to reduce stress

To obtain an indication of whether employers are taking any visible measures to reduce stress in the workplace, respondents in both March and April surveys from 2004 to 2008 were asked whether they were aware of any initiatives undertaken by their company to reduce stress at work in the previous 12 months. Table 3 shows the percentage of employees indicating the presence of initiatives out of all those able to answer this question. There is no significant change over time with around a third of respondents indicating the presence of stress initiatives at work each year.

Table 3. Initiatives on stress by year

Year	Those indicating initiatives on stress in the last 12 months*		
	Percentage	CI Lower	CI Upper
2004	34.6%	31.0%	37.2%
2005	34.7%	31.0%	37.6%
2006	36.9%	33.9%	40.0%
2007	32.8%	29.6%	36.1%
2008	33.7%	30.5%	36.9%

P value for trend across years = 0.80

* Around 10% indicated that they didn't know, and are excluded from calculations

3.1.9 Discussions with Line Managers about Stress

Respondents in both March and April surveys from 2004 to 2008 were asked whether they had discussed work-related stress with their line manager over the last 12 months. There was no trend over time with just over one third of British employees reporting such discussions (Table 4).

Table 4. Discussion of stress with line manager by year

Year	Those indicating discussed stress with manager in the last 12 months*		
	Percentage	CI Lower	CI Upper
2004	35.3%	31.8%	37.8%
2005	36.4%	33.8%	39.2%
2006	35.4%	31.5%	38.3%
2007	34.9%	31.8%	38.0%
2008	35.7%	32.6%	38.9%

P value for trend across years = 0.94

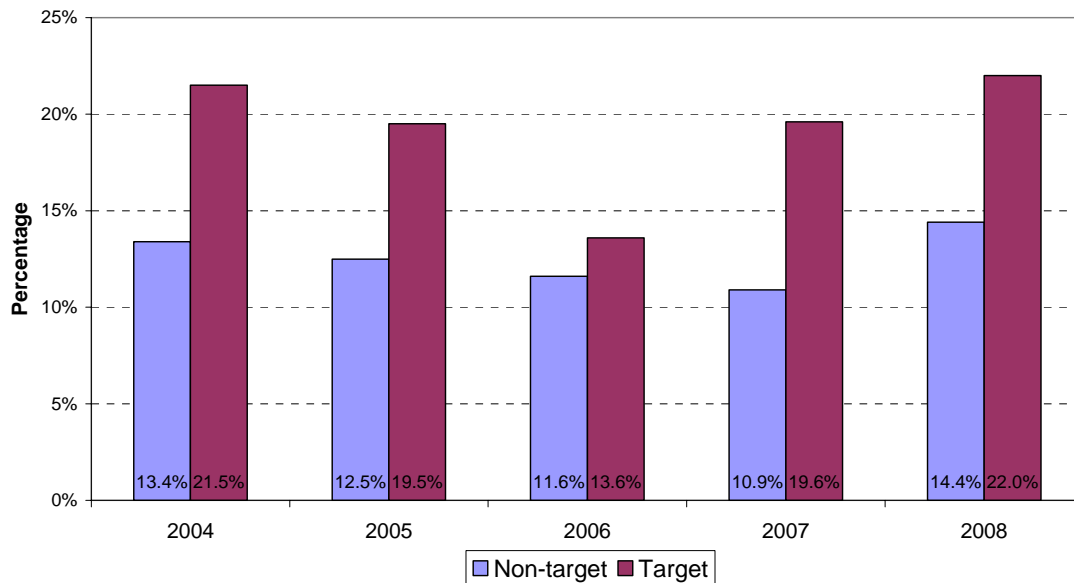
* Around 2% indicated that they didn't know, and are excluded from calculations

3.2 Trends by selected industry groups

3.2.1 Job stressfulness by selected industries

The percentage of those reporting their job as extremely or very stressful (defined as high job stress) by target sector status and time is shown in Figure 17. These data indicate no clear trend in number of employees reporting high job stress 2004 to 2008 within non-target industry sectors ($p=0.35$) or amongst employees in the target industry sectors ($p=0.81$). However visual inspection suggests there was a decrease in the target sectors between 2004 and 2006 followed by a rise back to previous levels.

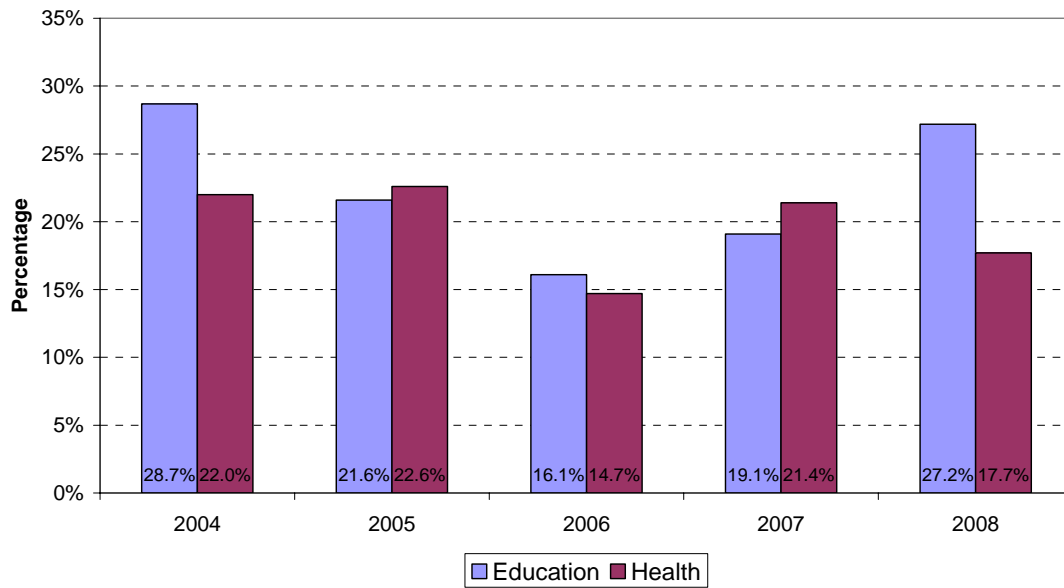
Figure 17. Percentage with high stress* by year and industry status



*High job stress refers to those who indicated that their job was extremely or very stressful

The survey has limited value in reliably assessing trends in high job stress within the 4 target SIC sections J, L, M and N. Indeed, numbers for sections J (Financial Intermediation) and L (Public Administration & Defence) are too low and unreliable. However, it is possible to assess trends in sections M, Education; and N, Health & social work, albeit with low power. These analyses, shown in Figure 18, indicate no significant trends in high job stress 2004 to 2008 among employees in education ($p=0.14$) or in the Health sector ($p=0.38$).

Figure 18. Percentage reporting high stress* by year and selected industry



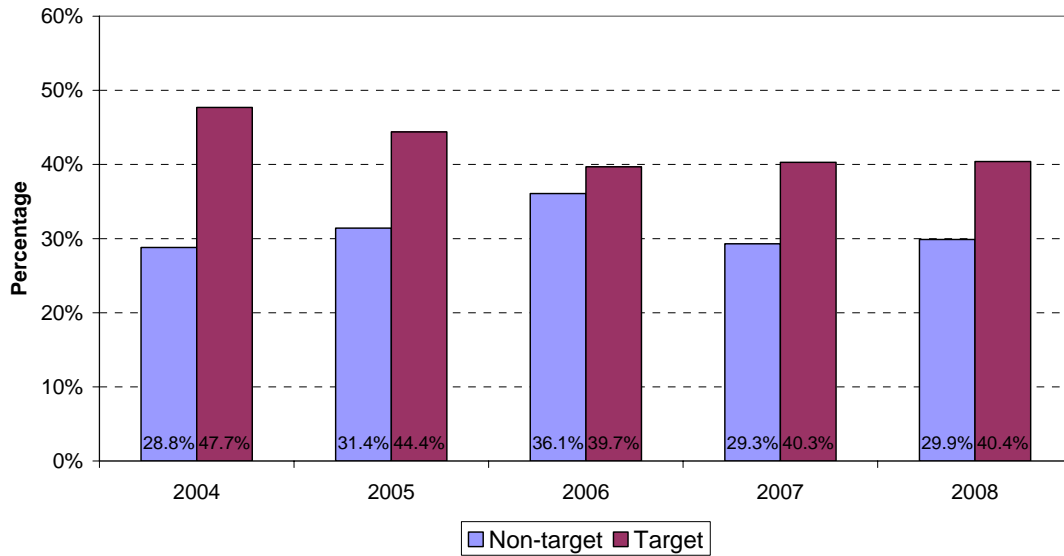
*High job stress refers to those who indicated that their job was extremely or very stressful

3.2.2 Initiatives to reduce stress by selected industries

Analysis of employees reporting initiatives to reduce stress within the last year by target and non-target sector and year are shown below in Figure 19. These data suggest no trend with time in the percentage of British employees in non-target sectors reporting initiatives in the previous 12 months to tackle stress ($p=0.52$) but a significant decreasing trend in target sectors in those reporting such initiatives ($p=0.05$).

There is a significant downward trend over time in employee reported initiatives on stress within the education sector ($p=0.01$) but no trend in the other target industry sections Financial intermediation, Public Administration & Defence, or Health & Social work. However, as noted these sub analyses have very low numbers and hence power so only gross trends would be identifiable statistically.

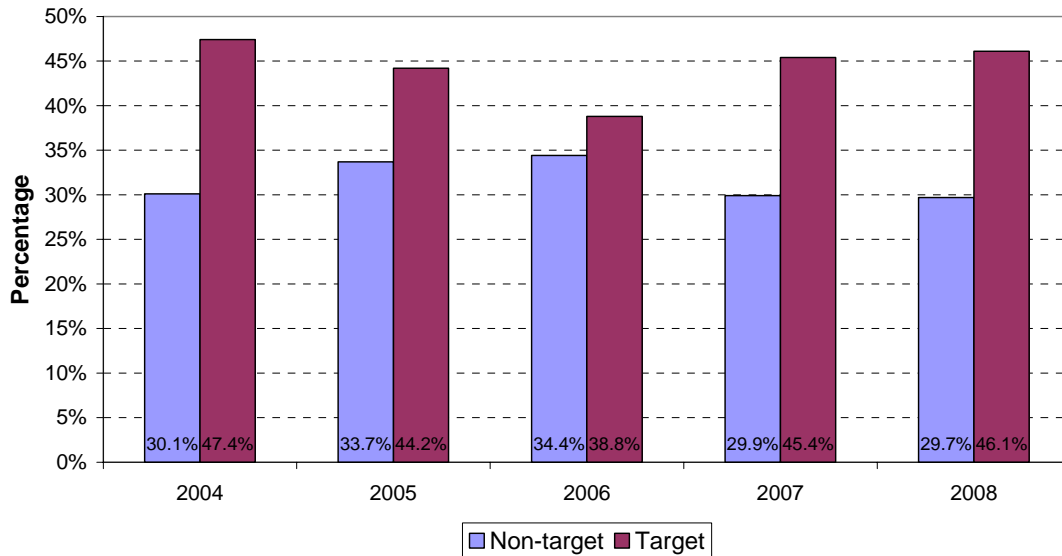
Figure 19. Percentage reporting initiatives on stress in previous 12 months by year and industry status



3.2.3 Discussions of stress with manager by selected industries

The proportion of employees reporting discussions of stress with their line manager in the previous 12 months is shown in Figure 20. Analysis indicated no trend ($p=0.96$) from 2004 to 2008 in the proportion of employees reporting such discussions in target sector organisations. Within non-target sector industries there was also no evident trend ($p=0.61$). Sub-analyses assessing trends over time within each of the key industry sectors demonstrated no significant reductions within specific industry sectors. However, as noted previously these sub analyses have very low numbers and hence power and reliability.

Figure 20. Percentage reporting discussing stress with their line manager in the previous 12 months by year and industry status



4. DISCUSSION

This report presents analyses of HSE modules measuring psychosocial working conditions in Britain within the March and April ONS Omnibus surveys for each year between 2004 and 2008. The first of these surveys was run prior to the launch of the Management Standards in November 2004. Previous reports have looked at the findings for that year, the stability of the scales, identifying target levels based on score distribution and looking at differences between key industry sectors. (HSE 2004; HSL & HSE, 2005). The 2006-2008 reports concentrate on examining the changes in working conditions from 2004 to 2008 in all industry groups and within selected industry groups.

The survey provides face to face interviews, with well trained interviewers, a relatively good response rate and utilisation of probability selection of the sample. Therefore methodological biases will be relatively low compared to lesser quality survey designs. However, the size of the survey is less than ideal when investigating some of the smaller industry sector groups of interest such as SIC section J: Financial intermediation, and SIC section L: Public administration & defence. Further years of data in future will add to the statistical power to investigate trends in relation to the scale and the industry sections where current analysis is less reliable.

4.1 Working conditions

The working condition scales have been developed to provide a more robust way of identifying working conditions in relation to the 6 areas covered by HSE's Management Standards for work-related stress. The scores derived for each scale cannot be compared across scales. For example a Demand scale score of 4 does not have a similar level of effect or meaning to a Control scale score of 4. However, all scale scores are orientated so that high scores indicate more favourable working conditions and are internally comparable. Hence the most reliable way to analyse is by looking at changes in the same scale score over time, as has been the case in this report, or between sectors.

Generally the findings show little change in working conditions in Britain between 2004 and 2008, although there is a significant improvement in the Change scale over this time period. From a visual inspection of the data up to 2007, it appeared that there may have been the beginnings of an upward shift across the majority of the working conditions scales. However in 2008 many of these scales returned to previous levels and there is no longer any sign of a general improvement.

The Management Standards for work-related stress aim to generally improve these working conditions in Britain. It is still unclear how long it would take to be able to see a visible impact at a population level, but this survey provides no evidence of a population level change thus far. The most substantial period of awareness raising of the Management Standards approach took place between Summer 2006 and Spring 2007 when HSE ran a series of workshops across the target sectors previously mentioned. It has been assumed that once the process is initiated by an organisation it could be at least 18 months before any benefits are realised from interventions introduced. If the (untested) assumption is correct, then those organisations implementing the approach immediately after the earliest workshops would be on the verge of realising the benefits at around the time of this 2008 survey with other organisations catching up over the next 6-12 months. The current collection of data will however provide an indication of prevailing trends against which to assess impacts of HSE activity along with bespoke evaluation studies.

Analysis of single question items measuring working conditions are by definition less reliable than looking at overall scale scores and any analysis to that effect presented should be interpreted with greater caution.

4.2 Job stressfulness

It is recognised that the single item measure of job stressfulness used in this survey has its weaknesses. However, within the Stress and Health at Work study (SHAW), increased reporting of stressfulness was found to be associated with poor mental health as measured by the General Health Questionnaire and Hospital Anxiety and Depression scale (Smith *et al.* 2000). Smith *et al.* (2000) considered that reports of a job as very or extremely stressful was a surrogate indicator of 'high job stress'. The analysis here shows no significant trend over the period 2004 to 2008 although visual inspection suggests the indicator fell to a low level in 2006 before rising to previous levels by 2008. HSE's model is to improve the working conditions of British workers by appropriate stress management using a Management Standards approach or equivalent with the aim of producing a reduction in stress ill-health outcomes. Job stressfulness in such a model can be used as a marker that would be a precursor to stress outcomes but follow changes in the working conditions. It is highly likely that population level figures are influenced by factors other than the working conditions as covered by the Management Standards for work-related stress. In this respect identification of the underlying rate of change combined with information on the timing of predicted benefits realisation by sector will be used as part of the evaluation of the Management Standards activity in combination with more bespoke evaluation activity.

4.3 Perceived employer activity on stress

Two questions to crudely elicit the levels of current employer activities on work stress were asked in these surveys. Given these surveys sample employees that would generally not be those implementing the Management Standards, asking survey respondents directly about the Management Standards would not have been useful. However, measures of whether managers were discussing stress with their staff and the level of employee awareness of stress initiatives within their organisation could provide useful surrogate indicators. Approximately a third of respondents reported initiatives to reduce stress at work in the previous 12 months and this level was stable across the years 2004 to 2008. Similarly, an estimated one third of respondents reported they had discussed the stresses of their job with their line manager within the last 12 months and this level was stable across the years 2004 to 2008. It was postulated in previous reports on this survey that a rise in the number of employees aware of initiatives may occur in 2008 as a direct result of the rollout of the Management Standards. However no such change is evident as yet.

In respect of the proportion of employees over time reporting discussion of job stressors with their manager there is now no clear trend either among target or non-target sectors and decreasing among target sectors. As organisations continue to roll out the Management Standards process in 2008 we would expect to see an increase in reporting of discussion with managers, although no increase has been seen as yet despite the workshops held in 2006/07. It should be noted that if discussions centre around working conditions rather than the concept of stress, this question will not necessarily pick up Management Standards related activity in all cases.

These may in general be acting as poor indicators of appropriate stress management activity and further data from other sources as well as further years of data from this survey series will be needed to get a better handle on what these measures are providing indication of.

4.4 Conclusion

In conclusion, the general picture is of little change in psychosocial working conditions in Britain between 2004 and 2008. The faint signs of improvement emerging in 2007 have not developed into an upward trend. Furthermore the previously falling proportion of employees reporting their jobs as extremely or very stressful has risen this year, albeit non-significantly. This measure has previously aligned very closely with self-reported levels of work-related stress from the Labour Force Survey and it will be interesting to see whether the 2007/08 LFS results continue to follow a similar trend. It is unlikely that the rise and fall in those reporting their jobs as very or extremely stressful over the past five years is directly related to the Management Standards. The main effects of the Management Standards will be beginning to appear over the course of 2008 and these would be predicted to result in improved working conditions followed by an increasing fall in job stressfulness. There is no sign of this as yet. Collection of data on these underlying trends will in combination with other evidence enable better understanding of the possible effects of HSE's Management Standards in Britain.

5. REFERENCES

- Clarke, S D (2004). Development of an Indicator Tool to Support the Stress Management Standards. MSc Statistics Dissertation, Sheffield Hallam University.
- Cousins, R, Mackay, C J, Clarke, S D, Kelly, C, Kelly, P J and McCaig, R H (2004). 'Management Standards' and work-related stress in the UK: Practical development. *Work and Stress*, 18(2), 113-136.
- Cuzick, J. (1985). A Wilcoxon-type test for trend. *Statistics in Medicine*, 4, 87-90.
- Health and Safety Executive (2004). [Psychosocial Working Conditions in Britain in 2004](#).
- Health and Safety Executive (2006a). Web page accesses October 2006. Management standards for work-related stress. <http://www.hse.gov.uk/stress/standards/index.htm>.
- Health and Safety Executive (2006b). Web page accesses October 2006. Stress-related and psychological disorders. <http://www.hse.gov.uk/statistics/causdis/stress.htm>.
- Health and Safety Executive (2006c). [Psychosocial Working Conditions in Britain in 2006](#).
- Health and Safety Executive (2007). [Self-reported work-related illness and workplace injuries in 2005/06: Results from the Labour Force Survey](#).
- Health and Safety Laboratory and Health and Safety Executive (2005). [Psychosocial Working Conditions in Britain in 2005](#).
- Mann, H.B. and Whitney, D.R. (1947). On a test of whether one or two random variables is stochastically larger than the other. *Annals of Mathematical Statistics*, 18, 50-60.
- Office for National Statistics (2003) UK Standard Industrial Classification of Economic Activities 1992. http://www.statistics.gov.uk/methods_quality/sic/contents.asp.
- Office for National Statistics (2006). Web page accesses October 2006. Serving the public / Omnibus Survey / Sample. <http://www.statistics.gov.uk/about/services/omnibus/sample.asp>
- Smith, A, Johal, S, Wadsworth, E, Davey Smith, G, and Peters, T (2000). The Scale of Occupational Stress: The Bristol Stress and Health at Work Study. HSE Contract Research Report 265/2000, HSE Books, Sudbury.
- SPSS (1999) SPSS Base 10.0 User Guide, SPSS Inc, USA.
- StataCorp (2003): Stata Statistical Software Release 8.0. Stata Corporation, College Station, Texas, USA 2003.
- Webster, S, Buckley, P, and Rose, I (2007). [Psychosocial Working Conditions in Britain in 2007](#).
- Wilcoxon, F (1945). Individual comparisons by ranking methods. *Biometrics*, 1, 80-83.

Appendix A – Additional Tables

Table A1. Role mean score by year and target status

Role	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	4.73	268	4.71	605
2005	4.67	219	4.71	626
2006	4.75	161	4.69	442
2007	4.72	171	4.78	389
2008	4.61	187	4.71	316

Table A2. Relationships mean score by year and target status

Relationship	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	4.03	268	4.16	605
2005	4.07	219	4.18	626
2006	4.12	161	4.21	442
2007	4.01	171	4.18	389
2008	4.13	187	4.20	316

Table A3. Change mean score by year and target status

Change	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	3.31	268	3.40	601
2005	3.33	219	3.53	626
2006	3.30	161	3.49	442
2007	3.31	171	3.57	388
2008	3.54	187	3.52	316

Table A4. Demand mean score by year and target status

Demand	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	3.51	249	3.52	576
2006	3.35	103	3.55	533
2007	3.44	174	3.64	331
2008	3.44	209	3.65	352

Table A5. Control mean score by year and target status

Control	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	3.42	250	3.47	577
2006	3.51	103	3.48	533
2007	3.48	174	3.49	332
2008	3.32	209	3.52	352

Table A6. Managerial Support score by year and target status

Manager S	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	3.87	249	3.62	576
2006	3.59	103	3.74	533
2007	3.91	174	3.68	331
2008	3.77	209	3.68	352

Table A7. Peer Support score by year and target status

Peer S	Target Group		Not Target Group	
	Mean	Obs	Mean	Obs
2004	4.07	249	3.92	576
2006	3.83	103	4.01	533
2007	4.10	174	3.94	331
2008	4.03	209	3.88	352

Appendix B- Questionnaires

Responses relating to the following 35 statements have been sought in each of the five survey years. Other demographic information is collected but the majority of the analyses presented relate to these core questions.

Respondents are asked to indicate on a Likert scale the most relevant response to the listed statements. There are two Likert scales used:

- (a) Never – Seldom – Sometimes – Often – Always
- (b) Strongly disagree – Tend to disagree – Neutral – Tend to agree – Strongly agree

The Likert scale used for each statement is indicated with an (a) or (b) in parentheses below.

1. I am clear what is expected of me at work (a)
2. I am clear about the goals and objectives for my department at work (a)
3. I know how to go about getting my job done at work (a)
4. There is friction or anger between colleagues at work (a)
5. I am clear what my duties and responsibilities are at work (a)
6. I understand how my work fits into the overall aim of the organisation (a)
7. I am subject to personal harassment in the form of unkind words or behaviour at work (a)
8. I am subject to bullying at work (a)
9. I have unrealistic time pressures at work (a)
10. I have a choice in deciding how I do my work (a)
11. Staff are consulted about change at work (b)
12. Relationships at work are strained (b)
13. I have sufficient opportunities to question managers about change at work (b)
14. When changes are made at work, I am clear how they will work out in practice (b)
15. My line manager encourages me at work (b)
16. I can decide when to take a break at work (a)
17. I am pressured to work long hours (a)
18. I have unachievable deadlines at work (a)
19. I have to work very fast at work (a)
20. I am given supportive feedback on the work I do (a)
21. I have to work very intensively at work (a)

22. I have a say in my own work speed (a)
23. I have a choice in deciding what I do at work (a)
24. I have to neglect some tasks because I have too much to do at work (a)
25. Different groups at work demand things from me that are hard to combine (a)
26. I am unable to take sufficient breaks at work (a)
27. If the work gets difficult, my colleagues will help me (a)
28. I can rely on my line manager to help me out with a work problem (a)
29. I have some say over the way I work (b)
30. I get the help and support I need from colleagues at work (b)
31. I receive the respect I deserve from my colleagues at work (b)
32. I can talk to my line manager about something that has upset or annoyed me about work (b)
33. I am supported through emotionally demanding work (b)
34. My working time can be flexible (b)
35. My colleagues at work are willing to listen to my work-related problems (b)

The following core questions are also asked:

1. In general, how do you find your job?
(not at all stressful; mildly stressful; moderately stressful; very stressful; extremely stressful)
2. As far as you are aware, has (your employer) in your main job undertaken any initiative in the last 12 months to reduce stress at work?
(yes; no; don't know)
3. In the last 12 months, has your line manager discussed with you the stresses in your job?
(yes; no; don't know)