

## Loughborough University Institutional Repository

---

# *Stress management standards: a warning indicator for employee health*

This item was submitted to Loughborough University's Institutional Repository by the/an author.

**Citation:** KAZI, A. and HASLAM, C.O., 2013. Stress management standards: a warning indicator for employee health. *Occupational Medicine*, 63 (5), pp.335-340

**Additional Information:**

- This is a pre-copyedited, author-produced PDF of an article accepted for publication in *Occupational Medicine* following peer review. The version of record is available online at: <http://dx.doi.org/10.1093/occmed/kqt052>

**Metadata Record:** <https://dspace.lboro.ac.uk/2134/19390>

**Version:** Accepted for publication

**Publisher:** © Oxford University Press

**Rights:** This work is made available according to the conditions of the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) licence. Full details of this licence are available at: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Please cite the published version.

**Stress Management Standards: a warning indicator for employee health and attitudes**

Mr Aadil Kazi: MSc, and Professor Cheryl Haslam PhD

Work and Health Research Centre, School of Sport, Exercise and Health Sciences,  
Loughborough University, Leicestershire, LE11 3TU, UK

Correspondence to: Aadil Kazi

Work and Health Research Centre, School of Sport, Exercise and Health Sciences,  
Loughborough University, Leicestershire, LE11 3TU, UK  
Tel: +44 (0) 1509 228484; e-mail: A.Kazi@lboro.ac.uk

## **Acknowledgements**

The authors are grateful to Neil Budworth, Louise Boston and Deborah McGrath who provided the support and resources to conduct this research. We would also like to thank all of the employees in the organisation who contributed so generously to this study.

## **Stress Management Standards: a warning indicator for employee health and attitudes**

### **ABSTRACT**

**Background:** Psychological stress is a major cause of lost working days in the UK. The Health and Safety Executive have developed Management Standards (MS) to help organisations to assess work-related stress.

**Aims:** The aim of this study was to investigate the relationships between the MS Indicator Tool and employee health, job attitudes, work performance and environmental outcomes.

**Methods:** The first phase involved a survey employing the MS Indicator Tool, GHQ-12, job attitudes, work performance and environmental measures. Three hundred and four call centre employees from a large utility company responded. The second phase comprised six focus groups to investigate what employees believed contributed to their perceived stress.

**Results:** Significant negative correlations were found between GHQ-12 and two MS dimensions; demands ( $Rho = -0.211$ ,  $p = 0.000$ ) and relationships ( $Rho = -0.134$ ,  $p = 0.02$ ). Other dimensions showed no significant relationship with GHQ-12. Higher levels of stress were associated with reduced job performance, job motivation and increased intention to quit but low stress levels were associated with reduced job satisfaction. Lack of management support, recognition and development opportunities were identified as sources of stress.

**Conclusion:** The findings support the utility of the MS as a measure of employee attitudes and performance.

Abstract word count: 200

Key words: Stress, management standards, occupational health, risk assessment

## Key Points

- The results demonstrated that the Management Standards Indicator Tool dimensions of job demands and work relationships were significantly related to the General Health Questionnaire 12-item version.
- Employers may also be able to use the Management Standards as an indicator of employee attitudes (satisfaction, intention to quit, motivation and performance).
- Implementing supervisor support roles in contact-centres may improve employee assistance and provide recognition and promotion opportunities that could reduce staff turnover.

## INTRODUCTION

A review of the health of Britain's working population reported that 175 million days were lost to illness in 2006 (1). Stress is now the most common reason for sickness absence, with the average length of stress related sick-leave being 22.6 days (2). In 2004, the UK Health and Safety Executive (HSE) launched the Management Standards (MS) which offers a step-by-step approach to the assessment and management of the causes of work-related stress (3). The MS define the characteristics and culture of an organisation where work-related stress is being managed effectively and provide a benchmark by which an organisation can measure their performance. The MS have developed from in-depth research and include seven work areas which cover the primary sources of stressors at work: Demands, Control, Manager's support, Peer support, Relationships, Role and Change (3–5).

A Management Standards (MS) Indicator Tool, a 35-item self-report questionnaire instrument has been developed to identify potential risk 'hot spots' within the seven key work areas. Whilst the MS Indicator Tool was originally tested as a multidimensional measure of work-related stress (4), research has found it to be a robust instrument that could be used to calculate an overall uni-dimensional work-related stress score (6). The tool was designed and validated as an organisational level risk assessment. However, it seems organisations can tailor the approach to suit company processes. For example, the tool can be applied to individual risk assessments, return to work interviews, or included in employee opinion surveys.

Research has shown the long-term effects of psychological stress can result in negative psychological, behavioural and physical health effects (7). For that reason, as a reliable stress risk assessment, it would seem appropriate to assume that the MS Indicator Tool results should correlate with existing measures of employee health outcomes, job attitudes and work performance. The present study explored the relationships between the MS Indicator Tool and other measures of employee health, job attitudes, work performance and

the physical environment. The research also employed a qualitative phase to gain further information on the causes of work-related stress and possible interventions.

## **METHODS**

The research was conducted in a UK customer service contact-centre of a large energy supplier. Phase 1 of the study involved an employee survey and Phase 2 comprised a series of focus groups to explore employee perceptions of the sources of work-related stress. Recruitment of participants for phase 1 was completed over 2 weeks where the researcher was given permission to attend and present in team meetings. During each meeting, the research was explained and each employee was administered a paper copy of the questionnaire. Employees were asked to return completed questionnaires to the researcher onsite. At the end of the questionnaire, participants were invited to contact the researcher (by email or at the end of the session) if they were interested in taking part in phase 2 of the research. All focus groups were conducted on-site, during work time and took approximately 60 minutes. The research received approval from Loughborough University ethics committee.

### **Phase 1 - Questionnaire**

The HSE's Management Standards Indicator Tool, a 35-item self-report screening questionnaire was used to assess the current organisational climate. The work areas and number of questions include job demands (n=8), control (n=6), manager support (n=5), peer support (n=4), relationships (n=4), role (n=5) and change (n=3). The questions asked respondents to rate themselves on a 5-point Likert scale.

Self-reported psychological health outcomes were measured using the General Health Questionnaire 12 (GHQ-12) (8), which assesses psychological well-being. The GHQ asks respondents to report how they felt recently on a range of variables using a 4-point Likert scale. Job attitudes were measured using scales that asked respondents to rate themselves

on a 7-point Likert scale. Job motivation was scored using a 6-item measure that assessed the degree to which a person wants to work well in their job (9). Job satisfaction and intention to quit were each assessed using a 3-item measure from the Michigan Organizational Assessment Questionnaire (10).

Environmental stressors were measured using an 11-item survey that assessed physical job characteristics by asking participants to rate environmental stressors on a 3-point Likert scale. Eight questions were extracted from the USDAW Stress Questionnaire and 3 site-specific questions were added by the researcher after investigating the workspace (11). Job performance data was collected using a question from the WHO's Health and Work Performance Questionnaire (HPQ) (12). Participants were asked to rate their overall job performance in the past four weeks using a 10-point Likert scale. Demographic data, job title, tenure and job type were also assessed.

## **Phase 2 – Focus Groups**

The research team developed a set of questions (n=22) for the focus groups that were designed to evaluate the current processes within the business. Data was recorded and transcribed with participants' consent. The transcriptions were analysed by the sorting of material into emergent themes (13). The six topics and number of questions comprised: job roles, responsibilities and demands (n=2); skills needed and the training received (n=3); management communication, support and abilities (n=5); monitoring and feedback (n=2); recognition and scope for responsibilities/promotion (n=3); organisational policies and support available to help deal with stress (n=7).

## **RESULTS**

Table 1 summarises the demographic characteristics of the 304 survey participants.

(Table 1)



To assess the relationship between the MS and the GHQ-12, a Spearman's Rho correlational analysis was performed on the individual ranked scores for each work stressor (Table 2). Results found scores on work demands and relationship to be significantly negatively correlated with GHQ-12 outcomes. The Spearman's Rho analysis results for the other 5 areas of the MS found no significant correlation with the GHQ-12.

(Table 2)

To investigate the relationship between the MS and GHQ-12 further, the MS results were dichotomised into values for low stress levels and high stress levels. Table 3 shows the result from a Wilcoxon Mann-Whitney U non-parametric test which shows no significant relationship between overall MS and GHQ-12 scores.

(Table 3)

The relationship between the MS and job attitude scales were assessed using Spearman's Rho correlational analyses (Table 4). A significant positive correlation was identified between the MS and job motivation. Moreover, a significant negative correlation was found between the MS and intention to quit. However, a significant negative correlation was also found between the MS and job satisfaction.

(Table 4)

Table 4 also shows Spearman's Rho correlational analyses between job performance scores and the MS. A significant positive correlation was found between the MS score and employee job performance. When investigating this further, the work area of manager support was found to be the factor that was significantly positively correlated with job performance. The 3 most problematic environmental issues were *computers/automated*

*systems breaking down, dirty or badly maintained areas of work and overcrowding/seating arrangements.* A single mean environmental score was calculated combining all 3 variables so that they could be ranked and compared against the MS scores. The Bonferroni Correction was applied to ensure the overall familywise significance criterion of 5% was adjusted for. The individual significance criterion was adjusted to  $p < 0.016$ . There was a significant negative correlation between the MS and the combined environmental stressors.

Six focus group discussions were conducted to supplement the quantitative findings. Employees that were in the same work-team were grouped together and focus group participants were randomly selected from each team so that a representative sample of the call centre was selected ( $n = 43$ ). Five of the focus groups consisted of 4 male and 3 female participants and 1 group consisted of 5 female and 3 male participants. The employees were aged between 20 – 55 years.

Participants generally reported training to be of little value and as such identified this as their first source of stress because they were not equipped with the correct skills to do the job. Employees reported learning on the job as being most effective because their roles required more practical training (e.g. how to action a bill) than background information (e.g. how energy is delivered to the customer):

*We did not really get hands on training ... by being on the phones by myself I would learn more. I personally feel that the training aspect of it was to give you an insight into the work, which would have been fine if the system was set up so that there was a lot of support (Female, 54).*

One skill that employees reported as being vital, yet something the organisation did not train them in was time management:

*I have come from a background where all of the teams that I have been on I have always been told; you need to do this, you need to do that, this is a priority ... I think just something as simple as training on managing your workload [and] deciding what is a priority [is required] (Female, 24).*

When asked about how often employees communicated with their managers, some employees reported having regular contact, whilst others reported both parties could go a week without speaking. Employees understood managers had high workloads, but complained they were reluctant when it came to providing employee support. For employees that did receive help from their managers, the employees criticised their managers' lack of knowledge and skills with regards to job specific tasks. This made employees feel like they lacked suitable management support and because of this they would visit a more experienced colleague:

*There always tends to be ... the situation where everyone will go to one person on the team, because it is better to go to them than to go to the manager ... We get in trouble for it as well (Female, 29).*

Customer service performance used to be assessed by systems where supervisors would listen remotely to a representative's call and score employees on the level of service given. The contact-centre has recently implemented a new monitoring system that records calls as before, but it also records the actions taken on the computer by the agent. This was put into practice to ensure employees were searching through the correct files. Most participants could understand why the system was in place but some felt as though this technique was excessive. Participants also reported inconsistencies in the amount of monitoring they were exposed to. Some were monitored weekly, some reported that they were never monitored and others were excessively monitored. Lack of monitoring caused concern because employees wanted feedback on their performance. On the other hand, excessive monitoring had a poor effect on productivity because employees double-checked their work which

meant tasks took longer to complete. Management feedback was reported as unconstructive which was attributed to lack of training and understanding of employee roles:

*I had one call; customer is struggling to pay her bills. So I asked her to set up a weekly payment arrangement. She was really happy about that ... and then my manager who had been listening to the call [which prompted to sell a product] questioned why I did not promote it? I did not think the customer would be able to afford it. [He said]... 'you're making presumptions ... you have to plant that idea in their head' (Female, 29).*

Participants reported lack of recognition for effort or productivity and this was a great source of dissatisfaction. Some employees stated they just do the minimum not to get dismissed:

*You have got people who come into this job just to do this job and go away and not really put anything into it, but for me ... to get paid the same salary as them when they are not really performing at the same level that I am ... gives me no motivation to really work hard (Male, 39).*

There has been a recent emphasis on sales and employees reported they did receive some recognition for this. However, lack of acknowledgment for the tasks they do on a day-to-day basis (customer service) is a key factor that influences their job satisfaction and motivation:

*If we get a sale ... we will take a print and put it in a bucket, so our manager sees us put it in a bucket and says well done [but] whether you make a million customers happy in a month, they do not care about that (Female, 33).*

There were many employees who stated they wanted to take on more responsibility at work but had problems because of the shortage of development opportunities available on site.

Even if a position became available, employees did not have the relevant skills for a successful application due to the lack of responsibilities given to them:

*I recently went for a manager position and when I got my feedback, there was so much stuff that you needed that I did not have ... but you think, well, what opportunities are there for me to get that experience? (Female, 29).*

Participants were asked what the organisation could do to help reduce stress and they suggested having experienced supervisors in the contact-centre that might assist and advise employees with any customer related queries they had:

*[We need] floor walkers who have information and no commitment to any workload. You can shout over to him and say, x, y, z, help me out and he can sit with you ... just to have someone that you could go to see to get some assistance (Male, 39).*

## **DISCUSSION**

Results show that only certain dimensions of the MS Indicator Tool are related to the GHQ-12. Job demands were found to be a predictor of well-being which is in line with previous research (14). Furthermore, improved work relationships correlated to lower GHQ-12 scores supporting the suggestion that contact-centre employees get most pleasure from their social network (15). This suggests that employee's health outcomes improve if the stress experienced from work demands and work relationships reduce.

The results suggest that organisations can use the MS to indicate employee job satisfaction, job motivation, job performance and intention to quit. Employees who reported low stress scores using the MS Indicator Tool had higher levels of job motivation and their intentions to

quit the job reduced. One unanticipated relationship was that lower levels of stress related to lower levels of job satisfaction. This conflicts with research showing that a high level of stress causes low job satisfaction (16). Perhaps employees may need some pressure to think of their work as being significant and meaningful to the business (17). Employees reported significantly improved job performance when manager support was high. Factors such as job control, support and demands have generally been found as essential predictors of well-being at work (14,18,19). This suggests employees need responsibilities and pressure to make their work meaningful, but also that they need management support. This was reiterated in the qualitative findings as employees reported lack of support from managers as a major source of stress.

Survey results showed that the main external nuisances were computers breaking down, dirty work areas and overcrowding. Previous research suggests small risks such as these are harmful if employees are exposed to these stressors cumulatively (20). Support for this was found, as employees who had regular problems with computer systems, dirty desks and hot-desking (particularly not being able to find a desk) reported increased stress levels.

In agreement with previous research, this study highlighted monitoring as being beneficial to both the employees and organisation so that a high quality of customer service is delivered (21). However, excessive monitoring hampered employee performance because the extra pressure made them double-check their work. Lack of appropriate management support and development opportunities created a low morale which can have a negative effect on employee commitment (22). Implementing supervisor support roles in contact-centres could enrich the level of support employees receive and improve training, commitment, motivation, satisfaction and job performance.

Psychometric assessments have found the MS can be used as a one-dimensional score of stress *only* when second-order confirmatory factor analyses were performed and not as a

single-factor structure (6). We agree with this assessment as the seven work areas measure individual features of work-related stress and one cannot expect to measure overall stress if all the questions are simply added together. Therefore, the MS Indicator Tool should be used as intended when initially tested; as a multidimensional measure of stress (4). Single scores would be more manageable at organisational level, but they would have little meaning. By keeping these distinct areas separate, organisations can distinguish the contributors to employee stress and therefore interventions can be better targeted.

### ***Strengths, limitations and future directions***

Several limitations must be considered when evaluating the findings of this study. Firstly, this research was a self-report study, the focus group participants were self-selecting and it is reasonable to assume those who applied to take part could be employees who experienced more stress at work. Secondly, participants were employees of the customer service field in the energy industry and the findings may not be generalised widely. Future research will need to explore other occupational groups (private and public sector) to gain a clearer picture of the impact of the MS. Thirdly, this study did not include focus groups with managers, which would have offered greater insight of how the contact-centre operates. Future research may wish to assess line manager knowledge of the MS and how managers think the principles of the MS can be applied within their organisation.

### **Conclusion**

This research provides some insight into how the MS Indicator Tool relates to other measures of health and job attitudes. The findings suggest that organisations can use the MS tool to assess job attitudes and performance but, only the dimensions of demands and relationships were related to GHQ in this study. The MS tool was designed and validated as an organisational level risk assessment tool, however, organisations have already adapted it for use in other ways, such as individual risk assessments, return to work interviews and employee opinion survey. While this study offers further data on the validity of the MS, more

research is needed to evaluate how generalisable the MS Indicator Tool is when organisations employ it in these varied methods.



## References

1. Black C. *Working for a healthier tomorrow*. London: TSO, 2008.
2. Health and Safety Executive. *Self-reported work-related illness and workplace injuries in 2008 / 09 : Results from the Labour Force Survey*. London: National Statistics, 2010.
3. Health and Safety Executive. *Managing the causes of work-related stress*. London: TSO, 2007.
4. Cousins R, MacKay C, Clarke S, Kelly C, Kelly P, McCaig R. "Management Standards" work-related stress in the UK: practical development. *Work Stress*. 2004;**18**:113–36.
5. MacKay C, Cousins R, Kelly P, Lee S, McCaig R. "Management Standards" and work-related stress in the UK: policy background and science. *Work Stress*. 2004;**18**:91–112.
6. Edwards JA, Webster S, Van Laar D, Easton S. Psychometric analysis of the UK Health and Safety Executive's Management Standards work-related stress Indicator Tool. *Work Stress*. 2008;**22**:96–107.
7. Wilkins K, Beaudet M. Work stress and health. *Health Rep*. 1998;**10**:47–62.
8. Goldberg D, Williams P. *A user's guide to the General Health Questionnaire*. Windsor, UK: NFER-Nelson, 1988.
9. Warr T, Cook P, Wall K. Scales for the measurement of some work attitudes and aspects of psychological well-being. *J Occup Organ Psych*. 1979;**52**:129–48.
10. Cammann C, Fichman M, Jenkins D, Klesh J. *The Michigan Organizational Assessment Questionnaire*. University of Michigan: Unpublished manuscript, 1979.
11. USDAW. *Stress questionnaire* [Internet]. Manchester; 2006 [cited Mar 7 2008]. Available from: [http://www.usdaw.org.uk/getactive/resource\\_library/files/RLFStressQuest/StressQuest.pdf](http://www.usdaw.org.uk/getactive/resource_library/files/RLFStressQuest/StressQuest.pdf)
12. Kessler RC, Barber C, Beck A, Berglund P, Cleary PD, McKenas D, et al. The World Health Organization Health and Work Performance Questionnaire (HPQ). *J Occup Environ Med*. 2003;**45**:156–74.
13. Knodel J. Successful focus groups: advancing the state of the art. In: Morgan D, ed. *The Design and Analysis of Focus Group Studies in Social Science Research*. London: Sage, 1993; 35–50.
14. Karasek R, Theorell T. *Healthy work: stress, productivity, and the reconstruction of working life*. New York: Basic Books, 1990; 31–82.
15. Frenkel SJ, Tam M, Shire K. Beyond bureaucracy ? Work organization in call centres. *Int J Hum Resour Man*. 1998;**9**:37–41.

16. Ramirez AJ, Graham J, Richards MA, Gregory W, Cull A. Mental health of hospital consultants: the effects of stress and satisfaction at work. *Lancet*. 1996;**347**:724–8.
17. Siegall M, Gardner S. Contextual factors of psychological empowerment. *Pers Rev*. 2000;**29**:703–22.
18. Karasek R. Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Admin Sci Quart*. 1979;**24**:285-308.
19. Spector P. Interactive effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work Stress*. 1987;**1**:155–62.
20. Wellens BT, Smith AP. Combined workplace stressors and their relationship with mood, physiology, and performance. *Work Stress*. 2006;**20**:245–58.
21. Holdsworth L, Cartwright S. Empowerment, stress and satisfaction: an exploratory study of a call centre. *Leadership & Organization Development Journal*. 2003;**24**:131–40.
22. Malhotra N, Budhwar P, Prowse P. Linking rewards to commitment: an empirical investigation of four UK call centres. *Int J of Hum Resour Man*. 2007;**18**:2095–128.

**Table 1:** Survey sample demographic results

<b>Gender</b>	<b><i>n</i> (%)</b>
Male	157 (52)
Female	147 (48)
<b>Age</b>	<b>Mean months (range)</b>
Years	31 (18 – 62)
<b>Job tenure</b>	<b>Mean months (range)</b>
Months	63 (2 – 527)
<b>Job type</b>	<b><i>n</i> (%)</b>
Permanent full-time	222 (73)
Permanent part-time	68 (22)
Contract/ temp employee	14 (5)
<b>Job title</b>	<b><i>n</i> (%)</b>
Customer service specialist	230 (76)
Manager	2 (6)
New connections support	65 (21)
Operations team administrator	3 (1)

**Table 2:** Spearman’s Rho test correlating individual work stressors with GHQ scores

General Health Questionnaire score	Demands	Control	Manager support	Peer support	Relationships	Role	Change
	Correlation Coefficient	-.211(**)	.015	.015	.031	-.134(*)	.066
Sig. (2-tailed)	.000	.792	.791	.598	.020	.254	.793
<i>n</i>	300	300	300	300	300	300	300

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

**Table 3:** Mann Whitney U test statistics\* comparing MS and GHQ-12

	<b>General Health Questionnaire score</b>
<b>Mann-Whitney U</b>	11116.500
<b>Wilcoxon W</b>	22441.500
<b>Z</b>	-.179
<b>Asymp. Sig. (2-tailed)</b>	.858

\* Grouping Variable: Management Standards score

**Table 4:** Spearman’s Rho correlational analyses between the total MS and job attitudes, performance and environmental scores

	<b>Correlation Coefficient</b>	<b>Sig. (2-tailed)</b>
<b>Management Standards Indicator Tool</b>		
<b>Job motivation</b>	.356(**)	.000
<b>Job satisfaction</b>	-.313(**)	.000
<b>Intention to quit</b>	-.390(**)	.000
<b>Job performance</b>	.311(**)	.000
<b>Mean environmental score</b>	-.240(**)	.000
<b>Manager support</b>		
<b>Job performance</b>	.235(**)	.000

\*\* Correlation is significant at the 0.01 level (2-tailed) (99% confidence)

\* Correlation is significant at the 0.05 level (2-tailed) (95% confidence)