



Work-Related Stressors in Employees Presenting with Musculoskeletal Disorders

Laran Chetty

National Health Service, London, UK

ABSTRACT

Background: The purpose of this project was to evaluate work-related stressors in employees presenting with musculoskeletal disorders using the Management Standards for Work-Related Stress survey proposed by the Health and Safety Executive (HSE) at an occupational health service. **Methods:** An OPAS-G2 database was utilised to identify and select employees with musculoskeletal disorders that attended the occupational health service within the data collection period. Employees were mailed the HSE survey and asked to complete and return it in a pre-paid envelope. **Results:** The standards *Demands, Managers' Support, Relationships* and *Role* were in the red category while *Control, Peer Support* and *Change* were in the yellow category. **Conclusion:** The stressors associated with musculoskeletal disorders were not being optimally managed. An organisational strategy to tackle work-related stressors should be developed and implemented as a matter of high priority.

Keywords: Work-Related Stressors, Occupational Health, Employees, Psychosocial, Yellow Flags, Musculoskeletal Disorders.

INTRODUCTION

Work-related stressors impact the psychological, social and emotional quality of life of an individual [1]. In musculoskeletal health, a significant body of research supports the view that tissue damage alone is not enough to explain pain or dysfunction, and in some cases, the psychosocial variables are more predictive of long-term disability than the physical measures [2]. Musculoskeletal care involves the assessment of psychosocial factors that influence pain and dysfunction using the fear-avoidance model, pain neuroscience education and/or cognitive behavioural therapy for physical health [3-4]. These approaches identify the main psychological constructs, often referred to as yellow flags, such as pain anxiety, pain catastrophizing, fear avoidance behaviours and low pain self-efficacy which contribute to poor long-term musculoskeletal health outcomes [5-6]. However, these yellow flags are not without its limitation as they represent a generic set of cognitive and affective responses to pain and dysfunction in select populations. A more robust psychologically informed risk assessment is needed to enable organisations to review their performance in managing the stressors of employees presenting with musculoskeletal disorders in the workplace. The purpose of this project was to evaluate work-related stressors in employees presenting with musculoskeletal disorders using the Management Standards for Work-Related Stress survey proposed by the Health and Safety Executive (HSE) at a North London National Health Service Foundation Trust in the United Kingdom. The HSE is the enforcement agency for health and safety legislation compliance for the National Health Service in the United Kingdom.

METHODOLOGY

Data were collected from January 01 to June 30, 2024, at an occupational health service based within a North London National Health Service Foundation Trust in the United Kingdom. This Trust is one of the main healthcare providers within the North London borough of England. It employs approximately 11,000 staff members who are eligible to access the occupational health services for work-related or work-impacting health conditions. An OPAS-G2 database was utilised to identify and select employees with musculoskeletal disorders that attended the occupational health service within the data collection period. Musculoskeletal disorders were chosen as the health condition because of the impact of the disorder on long-term sickness absence and the extent of work-related stressors of affected employees is unknown. Employees were mailed the HSE Management Standards for Work-Related Stress survey and asked to complete and return it in a pre-paid envelope. Demographic data such as age, gender, years of service, work status and site of pain/injury was captured on a spreadsheet. The HSE Management Standards for Work-Related Stress survey is a self-report measure of an individual's emotional and stress state and comprises six standards, namely:

- Demands – workloads, work pattern and the work environment.
- Control – how much say the person has in the way they work.
- Support – encouragement, sponsorship and resources provided by the organisation, line manager and colleagues. Separated into Managers' Support and Peer Support.
- Relationships – promotion of positive working to avoid conflict and dealing with unacceptable behaviour.
- Role – understanding roles and ensuring that roles are not conflicting within the organisation.
- Change – management and communication of organisational change.

Each standard has a number of declarative statements which represent conformity with that standard. There are 35 declarative statements in total. The survey uses a five-point Likert scale with 23 questions measuring frequency (responses from never to always) and 12 questions measuring agreement (responses from strongly disagree to strongly agree) [7]. Cousins et al. [8] provide a detailed discussion of the development of this survey and evidence of its validity and reliability. The data were analysed using the HSE Analysis Tool for Work-Related Stress (AT). The AT scores responses to the survey from 1 to 5 with a lower score indicating poor performance or potential problem area. The mean numerical score for each standard and each declarative statement is then calculated and mapped to the AT colour coding chart. This project was classified as a service improvement initiative and therefore ethical approval was not required [9].

RESULTS

A total of 110 HSE Management Standards for Work-Related Stress surveys were posted during the data collection period. Overall, 48 (43.6%) employees completed and returned the survey and were included in the analysis. The demographics characteristics of employees are shown in Table 1. The mean age of the employees was 57.1 years, and the mean years of employment were 16.4 years. More females (66.7%) presented with musculoskeletal disorders than males (33.3%). The most common site of pain/injury was reported as spinal (54.1%), followed by lower limb (27.1%), and the least reported site was the upper limb (18.8%). Of those attending

the occupational health service for musculoskeletal disorders, more were at work (64.6%) compared to being off work due to pain/injury (35.4%).

Table 1: Demographic Characteristics

Variables	n	%
All employees	48	100
Years in service	16.4	
Gender		
Female	32	66.7
Male	16	33.3
Work status		
At work	31	64.6
Not at work	17	35.4
Site of pain/injury		
Spinal	26	54.1
Upper limb	9	18.8
Lower limb	13	27.1

The colour coding chart is shown in Table 2 and a summary of the colour coding for each standard and declarative statement is shown in Table 3. Overall, the standards *Demands*, *Managers' Support*, *Relationships* and *Role* were in the red category indicating very poor performance with urgent action needed, and standards *Control*, *Peer Support* and *Change* were in the yellow category indicating below average performance with a clear need for improvement. There were no standards in the aqua category indicating performance is good, but there is a need for improvement and in the green category indicating performance is very good and should be maintained.

Table 2: Colour Coding Chart

Colour	Meaning
Red	Very poor performance with urgent action needed
Yellow	Below average performance with a clear need for improvement
Aqua	Performance is good, but there is a need for improvement
Green	Performance is very good and should be maintained

Table 3: Management Standards for Work-Related Stress

Question	Demands	Average
3	Different groups at work demand things from me that are hard to combine	2.11
6	I have unachievable deadlines	3.53
9	I have to work very intensively	2.06
12	I have to neglect some tasks because I have too much to do	3.47
16	I am unable to take sufficient breaks	3.02
18	I am pressured to work long hours	2.76
20	I have to work very fast	2.16
22	I have unrealistic time pressures	3.57
	Overall	2.84
	Control	
2	I can decide when to take a break	2.91
10	I have a say in my own work speed	2.23

15	I have a choice in deciding how I do my work	4.39
19	I have a choice in deciding what I do at work	2.37
25	I have some say over the way I work	3.46
30	My working time can be flexible	3.08
	Overall	3.07
	Managers' support	
8	I am given supportive feedback on the work I do	1.79
23	I can rely on my line manager to help me out with a work problem	3.14
29	I can talk to my line manager about something that has upset or annoyed me about work	3.08
33	I am supported through emotionally demanding work	2.14
35	My line manager encourages me at work	2.22
	Overall	2.47
	Peer support	
7	If work gets difficult, my colleagues will help me	3.82
24	I get help and support I need from colleagues	3.75
27	I receive the respect at work I deserve from my colleagues	3.73
31	My colleagues are willing to listen to my work-related problems	3.22
	Overall	3.63
	Relationships	
5	I am subject to personal harassment in the form of unkind words or behaviour	3.75
14	There is friction or anger between colleagues	2.03
21	I am subject to bullying at work	4.45
34	Relationships at work are strained	2.79
	Overall	3.26
	Role	
1	I am clear what is expected of me at work	4.12
4	I know how to go about getting my job done	4.15
11	I am clear what my duties and responsibilities are	4.25
13	I am clear about the goals and objectives for my department	3.15
17	I understand how my work fits into the overall aim of the organisation	2.97
	Overall	3.73
	Change	
26	I have sufficient opportunities to managers about change at work	3.19
28	Staff are always consulted about change at work	2.68
32	When changes are made at work, I am clear how they will work out in practice	2.35
	Overall	2.74

DISCUSSION

This project revealed that the work-related stressors in employees presenting with musculoskeletal disorders attending an occupational health service at a North London National Health Service Foundation Trust in the United Kingdom was not being optimally managed. The overall AT result for *Demands* indicated very poor performance with urgent action needed. The main stressor for this standard was the difficulties experienced by employees to complete the work demands placed on them by different managers. MacDonald [10] noted the relationship between excessive demands in the workplace and its link to negative stress outcomes. The overall AT result for *Control* indicated below average performance with a clear need for improvement. The main stressor for this standard was the lack of workplace autonomy. A lack of autonomy in work practices can significantly reduce job satisfaction [11]. The overall AT result for *Managers' Support* indicated very poor performance with urgent action needed. Similar studies have been identified where management was rated poorly leaving employees

feeling resistant, resentful and unappreciated [12-13]. Lysaght & Larmour-Trode [14] reported that receiving encouraging feedback from management can provide employees with a feeling of success. The overall AT result for *Peer Support* indicated below average performance with a clear need for improvement. In this standard the results indicated that although general support from peers was lacking, in difficult circumstances peer support was available. Renger et al. [15] reported that receiving guidance and reassurance of worth from peers is linked to positive motivation and a reduction of work-related stressors. The overall AT result for *Relationships* indicated very poor performance with urgent action needed. The main stressor for this standard was being bullied at work. Harvey et al. [16] stated that bullying should not be considered normal behaviour or acceptable within the culture of the organisation. Harvey et al. [16] further stated that organisational systems which allow bullying behaviours to occur should be questioned. The overall AT result for *Role* indicated very poor performance with urgent action needed. The main stressors for this standard were employees being unclear about the goals and objectives for their department. Bano et al. [17] suggested that greater clarity on job roles and sharing organisational goals can foster commitment and reduce work-related stressors in the department. The overall AT result for *Change* indicated below average performance with a clear need for improvement. The main stressors for this standard were that the practical implications of change at work were not made clear and employees felt they were not consulted or had little opportunity to question management about the changes being made. Change can occur on a macro-level arising from wider political and organisational influences and on a micro-level with the introduction of subtle or substantial changes in working practices in the department [18]. The poor management of organisational change has been identified as a discrete stressor in the literature [19].

CONCLUSION

In conclusion, this project provides a broadened perspective for occupational health clinicians to assess psychosocial factors beyond yellow flags in employees presenting with musculoskeletal disorders by using a more robust psychologically informed risk assessment. The wider organisational implications of work-related stressors cannot be ignored because organisational culture that imposes excessive pressure on employees leads to increased sickness absence, reduced productivity and early retirement. The HSE Management Standards for Work-Related Stress survey was found to be a useful tool for providing a framework within which to explore work-related stressors in employees presenting with musculoskeletal disorders at a healthcare Trust in North London, United Kingdom. It enabled the organisation to assess its performance in managing stressors in the workplace. It is recommended as a matter of high priority that the Trust develops and implements an organisational strategy to tackle work-related stressors for employees presenting with musculoskeletal disorders. Conducting focus group discussions with employees and managers will support the development and implementation of an organisational strategy to tackle work-related stressors for employees presenting with musculoskeletal disorders.

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