The Relationship Between Employee Well-Being and Safety-Related Outcomes

by Ludmila Musalova

Workplace safety, otherwise known as Occupational Health and Safety, focuses on the physical and psychological well-being of employees and has attracted considerable attention from government bodies, organisations, employers and safety researchers due to the far-reaching implications, both economically and socially. However, comparatively little attention has been given to the impact of stress on safety, despite research evidence demonstrating a clear link between these two factors.

What is work-related stress, and why does it matter?

Work-related stress is often referred to as Occupational or Job-related stress, and describes stress that originates in the work environment. The Health and Safety Executive (HSE) defines work-related stress as "the harmful reaction that people have to undue pressures and demands placed on them at work" [1]. In comparison to other types of stressors, organisations play a role in moderating stress levels experienced by their workforce, and possess the ability to mitogate factors which contribute to stress, through, for example, job design, managerial support and workload management.

Intial research has focussed on investigating stress amongst "working professionals" - i.e. white-collar employees. In the past two decades, there has been a shift in attitudes towards stress in high-hazard industries, bringing a recognition that more attention needs to be devoted to this topic. The initial research driving the change focused on the transport and driving, oil and gas (offshore drilling) and nuclear sectors.

Despite organisations' best efforts to raise awareness of stress, there is still a stigma attached to mental health, especially amongst operational levels of employees. Workers within high-hazard industries are often exposed to competing objectives, such as tight deadlines, budgets, and customer demands, relative to their personal safety and wellbeing. Without clear leadership and defined organisational priorities, workers can feel left to make a personal judgement on what and how to prioritise their work, which can contribute to or exacerbate feelings of stress.

Organisational failure to recognise and mitigate workplace stressors, often leads to impaired employee well-being, manifested by physical and emotional depletion, reduced efficiency and performance. Therefore, the effects of work-related stress will ultimately have a negative impact upon safety and safety related outcomes of workers, as well as the productivity and quality of output.

Stress has been shown to have negative implications for safety by reducing individual's lack of focus and concentration, impairing cognitive processes and psychomotor control, increasing proneness to fatigue, reducing effortful coping and creating task disengagement. This is also supported by research, which has shown the following findings:

- Stress is a contributory factor in the occurrence of incidents - there is a strong correlation between stress and involvement in accidents [2];
- High levels of stress are associated with self-reporting of errors, lapses and violations [3];

- Stress significantly elevates at-fault crash risk [4];
- Occupational stress is significantly predictative of self-reported, fatigue-related near misses [5];
- Job stress negatively affects safety behaviour in terms of safety compliance [6] and safety participation [7].

Stress Prevention and Stress Management Techniques

In order to improve employees' well-being and ensure a safe working environment, organisations need to make mental health of their workforce a priority. There are three levels of interventions aimed at stress prevention, namely primary, secondary and tertiary level.

- Primary-level interventions aim to eliminate the stress hazards by creating a healthy workplace and control stressors to ensure that the work is a) interesting, b) rewarding and c) within the person's capabilities;
- Secondary-level interventions aim to isolate the hazard by ensuring that only adequately trained and experienced personnel attempts to manage the causes of stress. This could be done by improving the fit between the person and the job by staff selection, on the job training, performance feedback and monitoring of problems. In addition to employee participation/ engagement in well-being programmes to enhance the prior points.
- Tertiary-level interventions aim to minimise the stress hazard enabling employee's return to work. The interventions are designed to help the person experiencing stress or deal with the consequences and aftermath of stress.

Examples of specific interventions applied at each

Type of intervention	Aim	Strategies
Primary	Dealing with stressors	Review of well-being and stress management policies. Work contingency planning strategies for all staffing levels. Organizational Stress Audits in the form of well-being questionnaires and consultation with employees.
Secondary	Helping people to cope	Management and supervisory roles training in mindfulness, resilience and stress management coaching. All staff training on how to recognize the signs of stress. Stress evaluation toolkits specific to high hazard industries. Identifying mental health champions to reduce stigma and aid support. Improving the fit between the person and the job. Healthy lifestyle programs encompassing mental and physical health.
Tertiary	Putting remedial measures in place.	Employee Assistance Programs (EAP). Access to counselling. Diagnosis of depression and care management. Planned Return to Work (RTW) and ongoing support in stress management.

Table 1: Primary, secondary and tertiary stress-management interventions

level are provided in Table 1. It is important to note, that stress management interventions and related training, encompassing all three levels should be executed by suitably qualified practitioners, e.g. psychologists.

Beacons of excellence in stress prevention and stress management

In recent years, there has been an increased effort from high-hazard industries (rail, aviation, nuclear and energy sector) to include the mental health of their workforce within their health and safety improvement programmes. However, these efforts are being hindered by poorly-implemented strategies (e.g. strategies focusing mainly on primary stress management interventions or exhibiting a reactive approach to stress management; strategies targeting a specific segment of employees only or being implemented by staff without suitable qualifications and experience). In order to truly initiate change, the stress management interventions should:

a) Design organisation-specific and worker-related strategies, involving managers, supervisors, employees and employee representatives in the continuous risk assessment and evaluation process.

b) Use management 'top-down' approach to cascade commitment and support for mental health. This will help to reduce the stigma of mental health and provide support and encouragement for staff to recognise the signs of stress.

c) Use employee 'bottom-up' approach to increase employee participation in stress management initiatives, recognition of stress and willingness and confidence to seek early help if needed.

d) Engage in an open communication about mental health and stress to normalise mental health issues.

The effectiveness of interventions is also determined by a holistic approach to stress management strategies accounting for the psychological, emotional and physical aspects of individual well-being, support for which is offered by Lazarus's Multi-Transactional Model of stress adopted by Palmer and Dryden [8]. The model recognises the effect of internal and external pressures and coping resources on the appraisal of situation which will ultimately affect the response to stress manifested in different modalities. The model is based on the premise that unless all seven modalities (behavioural, affective, sensory, imagery, cognitive, interpersonal and drug/biological elements) are considered, the interventions may not be successful, as significant issues may be overlooked. The seven modalities, collectively known as BASIC-ID are used to distinguish and classify different elements in the response to stress, as documented in Figure 1 below.

Stress management interventions and their effectiveness

Organisational interventions to improve employee health focus on physical and psychological well-being, encompassing variety of strategies. This can take form of a simple massage chair, aiming to aid relaxation to more elaborative strategies, such as wellbeing road-shows, training management and supervisory roles in mindfulness, resilience and stress alleviating thinking, wellbeing and suicide prevention toolkits, and workplace wellbeing indexes. In high hazard industries, these interventions are still in the infancy stages and greater efforts should be exercised to decrease employees' stress and improve their overall wellbeing.

Organisations which exercised conscious efforts to improve employees' wellbeing, such as EDF

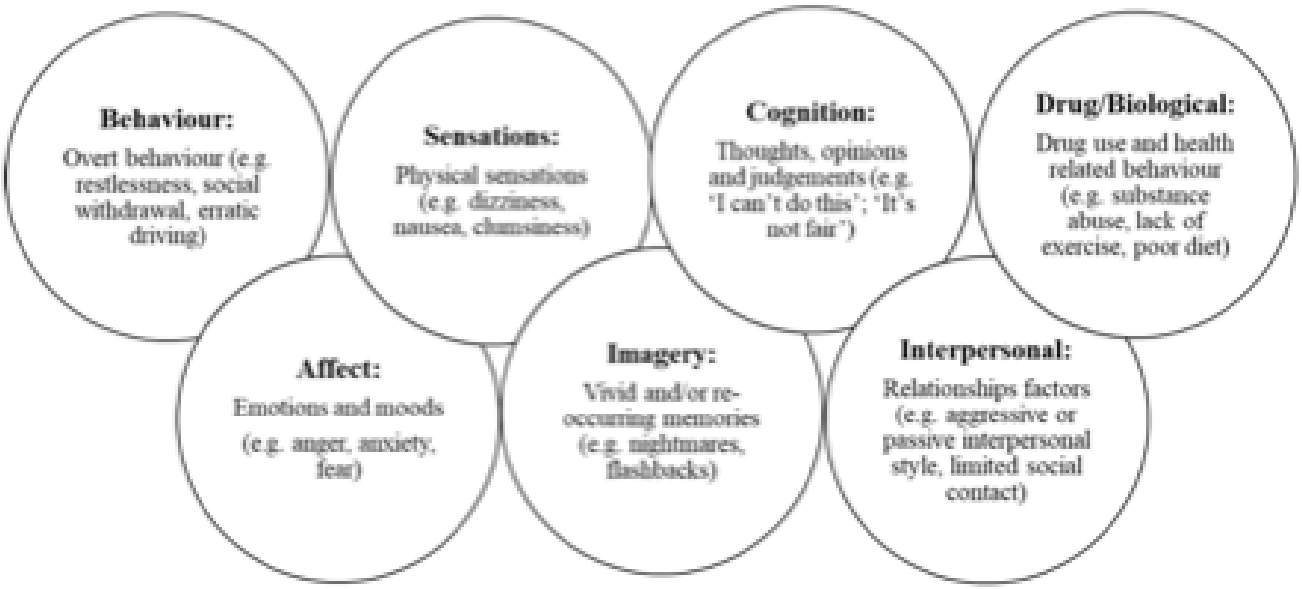


Figure 1: BASIC-ID distinguishing different elements in response to stress

(cognitive therapy and stress-recognition programmes) [9], Virgin Trains (education on mental health) [10] and BAE Systems (wellbeing awareness-raising programmes) [11], have noted a positive impact of these interventions, such as reduced stigma and increased reporting of mental ill health, improved working relationships and performance effectiveness, and overall job satisfaction. This also corroborates the documented benefits with academic research. For example, a meta-analytical study has shown that stress management training, namely cognitive behavioural training, relaxation techniques and multiple stress management training leads to improve psychological health and job satisfaction [12]. Positive effect was also demonstrated for comprehensible worksite stress management programme consisting of self-management and a stressor reduction process. The results have shown that this programme has increased work-units' productivity and decreased absenteeism [13]. There is also evidence that stress management interventions do improve safety related behaviour. For example, a study of nuclear plant control room operators testing the effect of mindfulness has confirmed that both safety compliance and safety participation behaviours are positively influenced by dispositional mindfulness (i.e. conscious awareness and attention to our thoughts and feelings in the present moment) [14].

The benefits of stress-management interventions are undeniable, as they contribute not only to individuals' positive wellbeing, but also affect organisational outcomes, such as performance, absenteeism, safety and compliance. As a result, high-hazard industries need to place greater focus on stress prevention and stress management amongst their workforces, as individuals' mental

health is reflective of their safety-related behaviour, which can have detrimental effects not only for the individuals but for organisations.

References:

1. Author unknown. Work related stress and how to tackle it. Health and Safety Executive. 2015 [cited 13th June 2018]. Available from: http://www.hse.gov.uk/stress/what-to-do.htm
2. Sutherland VJ, Cooper CL. Personality, stress and accident involvement in the offshore oil and gas industry. Personality and Individual Differences. 1991 Jan 1;12(2):195-204.
3. Westerman SJ, Haigney D. Individual differences in driver stress, error and violation. Personality and Individual Differences. 2000 Nov 1;29(5):981-98.
4. Legree PJ, Heffner TS, Psotka J, Martin DE, Medsker GJ. Traffic crash involvement: Experiential driving knowledge and stressful contextual antecedents. Journal of applied psychology. 2003 Feb;88(1):15.
5. Strahan C, Watson B, Lennonb A. Can organisational safety climate and occupational stress predict work-related driver fatigue?. Transportation Research Part F: Traffic Psychology and Behaviour. 2008 Nov 1;11(6):418-26.
6. Lu CS, Kuo SY. The effect of job stress on self-reported safety behaviour in container terminal operations: The moderating role of emotional intelligence. Transportation research part F: traffic psychology and behaviour. 2016 Feb 1;37:10-26.
7. Wang D, Wang X, Xia N. How safety-related stress affects workers' safety behavior: The moderating role of psychological capital. Safety Science. 2018 Mar 31;103:247-59.
8. Palmer S, Dryden W. Counselling for stress problems. London: Sage; 1994.
9. Hampson E, Soneji U. At a tipping point? Workplace mental health and wellbeing. Delloite. 2017 [cited 14th June 2018]. Available from: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/public-sector/deloitte-uk-workplace-mental-health-n-wellbeing.pdf
10. Clarkson. N. Virgin trains commit to tackling mental health stigma. Virgin. 2017. [cited 14th June 2018] Available from: https://www.virgin.com/careers/virgin-trains-commits-tackling-mental-health-stigma
11. Donaldson Feilder E, Podro S. ACAS Future of workplace relations -Discussion paper series: The future of health and well-being in the workplace. ACAS. 2012. [cited 13th June 2018] Available from: http://m.acas.org.uk/media/pdf/7/k/The_future_of_health_and_wellbeing_in_the_workplace.pdf
12. Kröll C, Doebler P, Nüesch S. Meta-analytic evidence of the effectiveness of stress management at work. European Journal of Work and Organizational Psychology. 2017 Sep 3;26(5):677-93.
13. Munz DC, Kohler JM, Greenberg CI. Effectiveness of a comprehensive worksite stress management program: Combining organizational and individual interventions. International Journal of Stress Management. 2001 Jan 1;8(1):49-62.
14. Zhang J, Wu C. The influence of dispositional mindfulness on safety behaviors: A dual process perspective. Accident Analysis & Prevention. 2014 Sep 1;70:24-32.

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