Jo Rick et al. A critical review of psychosocial hazard measures. Contract Research Report 356/2001

Summary (from the report)
Health and safety legislation requires that employers regularly conduct risk assessments to identify what in their workplace is a potential hazard to (i.e. could harm) employee health.

The idea of risk assessment for physical hazards is well-established. More recently, attention has focused on the assessment of risk from psychosocial hazards. Measures have been developed or adopted from research to assess the prevalence of workplace stressors.

Whilst much research has been done on stress, there exists no systematic overview of the different types of stressor measures available in the UK, nor is there any consistently recorded information about their relative merits.

This report seeks to fill that gap by identifying a wide range of commonly used measures, assessing the research evidence available on them and providing an overview of their relative strengths.

"There is little doubt that psychosocial hazards do cause harm to employees, but the field remains some way off a sound understanding of how, why [to whom] and the extent to which this happens".

Comment
Measurement of the prevalence of hazards cannot take the place of risk assessment, unless for some reason, a precautionary approach is being adopted. Lists of hazards and their prevalence can be used as part of a risk assessment.

In the case of psychosocial risk, much work has been done on the definition of hazards and protective factors. Much work remains to be done on understanding the balances between hazards and protective factors, and the effect of imbalance on well being and ultimately health, but first, the question addressed by this review – can the known and defined psychosocial hazards at work be accurately measured?

(From the report:)
The aim is to objectively assess the reliability and validity (actual and theoretical) of psychosocial hazard measurement instruments. Opinion of utility is included.

Whilst it is possible for an instrument to be consistent (reliable) but not accurate (valid), it is not possible for an instrument to be valid if it is not also reliable.

Measurement of reliability and validity requires some reference to outcomes. A number of outcomes or effects of exposure to stress are possible, including observation of behaviours, measures of production such as output, and through interviews. However, objective measures of these factors are rarely used in studies of stress measurement instruments. The most commonly employed outcome measure is self reported perception. This is theoretically justified by the proposal that it must be the perception of the hazard that presents the opportunity for the hazard to operate.

Comment
To some extent, using perception of hazard as a test of the validity of a hazard measurement tool is self-fulfilling. It is noteworthy that there is significant potential for the act of asking the question, to change the perception. Given these factors, the precise method of asking the question is critical to the reliability and validity of the findings.

(From the report:)
A second assumption is that the perception of psychosocial hazards is **causally related** to certain negative outcomes. For example, if an employee reports high workload or that they find their workload to be stressful, will it actually **cause** strain or lower levels of well-being at some point in the future? These are two examples of aspects of reliability and validity when applied to stressor measurement.

Comment
Predisposition to perceive a psychosocial hazard could also be the result of social factors, heightened awareness or ill health.

(From the report:)
The measures (tools) to be investigated in this review included:

- Chatman/the Culture Inventory
- Effort-Reward Imbalance (Siegrist)

- Frese
- Hassles and Uplifts Scale
- House *et a*l. — Measures of Role Stressors
- Jackson's Measures of Demand and Control
- **Job Content Questionnaire**
- **Job Diagnostic Survey**
- **Job Stress Survey**
- **Karasek's Measures of Demand and Control**
- Life Events Scale
- Michigan Stress Assessment
- NIOSH Generic Job Stress Questionnaire
- Occupational Pressure Inventory
- **Occupational Stress Indicator**
- Occupational Stress Inventory
- Organisational Stress Health Audit (OSHA)
- Pressure Management Indicator
- Quality of Employment Survey
- **Rizzo and House Measures of Role Conflict and Role Ambiguity**
- Role Experiences Questionnaire
- Stress Audits
- Stress Diagnostic Survey
- Stressors Checklist
- The Job Diagnostic Survey
- The Stress Profile
- Work Environment Scale
- Work Related Strain Inventory

Tools highlighted in bold were reviewed in detail as there was a significant body of literature available.

All these tools tend to contain lists of statements (items) describing aspects of work that may represent psychosocial hazards (for example: 'I have little control over the way my work is scheduled', 'I often experience marked increases in workload'). Respondents are then required to respond to the statement usually by indicating on a scale (which is then given a numerical value) the extent to which they agree or disagree with the statement or how often they experience the situation described.

Comment
Our experience of these tools agrees with the above. They tend to make some negative statement about work organisation and then measure how much the worker agrees.

Our principal doubt about this approach is that these negative statements should be balanced by equivalent positive statements. Validity of the tool should be assured if the order in which positive and negative statements are assessed makes no difference to the final score obtained.

(From the report:)
Detailed analysis of reliability, validity and utility is only possible for a small subset of the list of tools available. Criticism of these tools is detailed methodical and extensive and cannot be readily summarised.

On the basis of currently available evidence it is not possible to recommend the use of any of these measures for assessing psychosocial hazards, nor is it possible to identify one measure that is clearly superior to others.

Comment
In our view, the tool which best survives the rigors of the review is that of Karasek (also known as the Job Content Questionnaire).

In terms of liability, this tool is predictive of cardiovascular health risk. However, health risk is not necessarily linked to actual outcomes.

The tool also deliberately seeks to identify any imbalance between hazard and protection, an essential element of risk assessment as opposed to, hazard listing.

However, it is doubtful that the demand control axis is the only relevant axis.

An illustration of the concern that Karasek's approach has limitations is the recent refinement of it into a Demand/Control/Support model.

None of the tools was predictive of mental ill-health.

(From the report:)
The authors suggest that in the absence of tools which are clearly suited to risk assessment, organisations should develop their own measures. Extensive guidance on how this should be done is available.

Comment
In the light of this review, it would be difficult to recommend the use of generic off the shelf tools as part of the stress risk assessment and management process.

We have provided detailed criticism of official guidance on stress risk assessment in previous editions of this *Journal*.