

### The perceived stress-at-work scale

Marcatto F<sup>1</sup>, Di Blas L<sup>1</sup>, Luis O<sup>2</sup>, Ferrante D<sup>1</sup>

<sup>1</sup>Department of Life Sciences, University of Trieste, Italy; <sup>2</sup>Municipality of Trieste, Italy

Keywords: Work-related stress, perceived stress, job strain, stress assessment, HSE-MS indicator tool.

Psychometric instruments designed to assess work-related stress at the organizational level, such as the HSE-MS Indicator Tool, are usually very effective at identifying the domains of work design that, if not properly managed, can expose workers to high stress risk. These instruments, however, usually lack a measure of workers' perception of stress at work, which could be useful for identifying the organizational dimensions more associated with work-related stress.

The aim of the present study was to investigate the psychometric properties of a new short scale for assessing workers' perception of stress at work, which could be used along with organizational level questionnaires. The perceived stress-at-work scale is composed of 4 items assessing perception of job strain, pressure and agitation, and health concerns due to work.

A sample of public sector employees (N = 883) received a booklet containing the ERI-Q (long version, [1]), the HSE-MS Indicator Tool (Italian version, [2,3]), the Satisfaction with Life Scale [4] and the new 4-item perceived stress-at-work scale.

Results showed good reliability of the perceived stress-at-work scale (Cronbach's alpha = .80) and strong correlations with two concurrent measures, the ERI-Q imbalance score (r = .63, p < .001) and the ERI-Q overcommitment scale (r = .52, p < .001).

Next, structural equation modeling was used to investigate the relationships among organizational risk factors, measured by the HSE-MS Indicator Tool, perceived stress at work, and workers' life satisfaction. Three organizational dimensions, namely demand, relationships, and role, resulted to be significantly associated with perceived stress at work, explaining about 45% of its variance. Moreover, the effect organizational risk factors on workers' life satisfaction turned out to be mediated by workers' perception of stress at work.

The new perceived stress-at-work scale resulted to be a valid and reliable instrument, displaying good internal consistency and strong correlations with other individual-level measures of work strain. Furthermore, the scale could be used to highlight the critical intervention targets for risk stress management strategies, when applied along with an organizational level questionnaire such as the HSE-MS Indicator Tool.

1. Siegrist J, Starke D, Chandola T, Godin I, Marmot M, Niedhammer I, & Peter R. (2004). The measurement of effort–reward imbalance at work: European comparisons. *Social Science & Medicine*, 58:1483-1499.
2. Marcatto F, D'Errico G, Di Blas L, & Ferrante D. (2011). La valutazione dello stress lavoro correlato: Adattamento italiano dell'HSE Management Standards Work-Related

Stress Indicator Tool. *Giornale Italiano di Medicina del Lavoro ed Ergonomia*, 33:403-408.

3. Marcatto F, Colautti L, Larese Filon F, Luis O, & Ferrante D. (2014). The HSE Management Standards Indicator Tool: concurrent and construct validity. *Occupational Medicine*, 64:365-371.
4. Diener E, Emmons RA, Larsen RJ, & Griffin S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49:71-75.