

**2014-15 HWC Healthy Workplace Manage Stress
Campaign Partnership Meeting
*Brussels, April 8 2014***

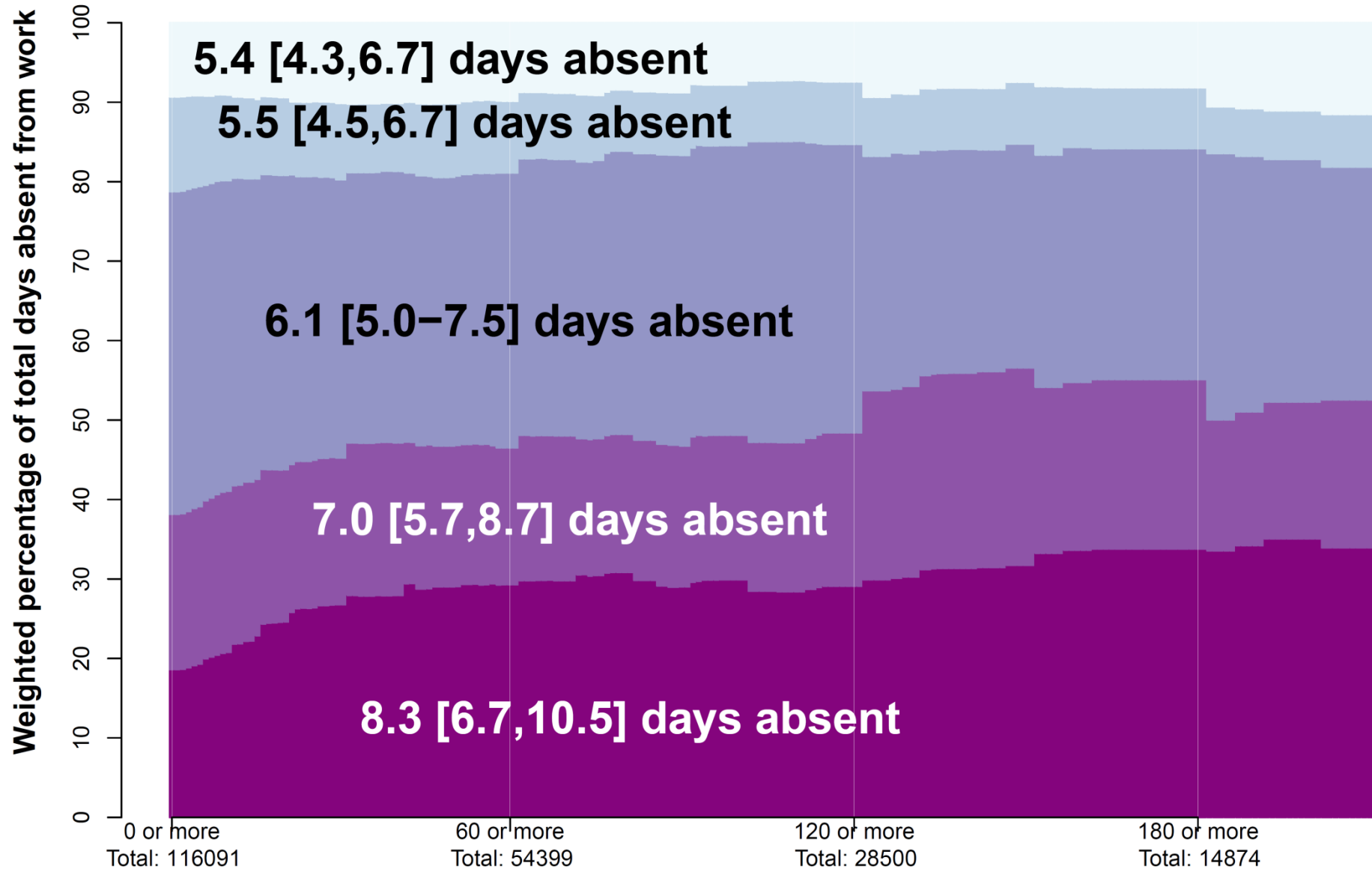
**Impact of stress and psychosocial risks on
health and performance-
Evidence at the organizational level**

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Do you experience stress in your work? EWCS 2010 – EU 15, n = 21201

■ Always
 ■ Most of the time
 ■ Sometimes
 ■ Rarely
 □ Never



Days absent from work over the past 12 months for reasons of health problems

Main Questions

- Is stress at work a real challenge to working populations across Europe?
- What is the scientific evidence linking stress at work with adverse health?
- What can be done at organizational level to manage stress and improve health at work?

Work ...

- provides a source of **regular income** and related opportunities
- provides a source of personal growth and **training** of **capabilities/competencies**
- provides **social identity, social status** and related rewards
- enables access to **social networks** beyond primary groups
- Impacts on personal **health and well being** by **exposure** to material and psychosocial **stressors**

Significant changes in the nature of work and labour market

- **Increase of work pressure**, pace of work, and competition, including 'high power work organization' (impact of economic globalization)
- High **demand for flexibility**, mobility, and adaptation of workers to new tasks/technologies
- Fragmentation of occupational careers, de-standardized or atypical work, and growing **job instability/insecurity**
- Increase of **service** and **IT professions/occupations** with high psychomental/emotional workload
- Segmentation of labour market; **social inequalities** in quality of work and employment

Increased pressure of rationalisation
(mainly due to wage competition)

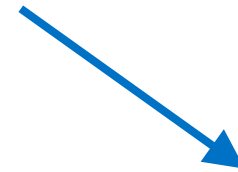
Downsizing, Merging, Outsourcing



Work
intensification



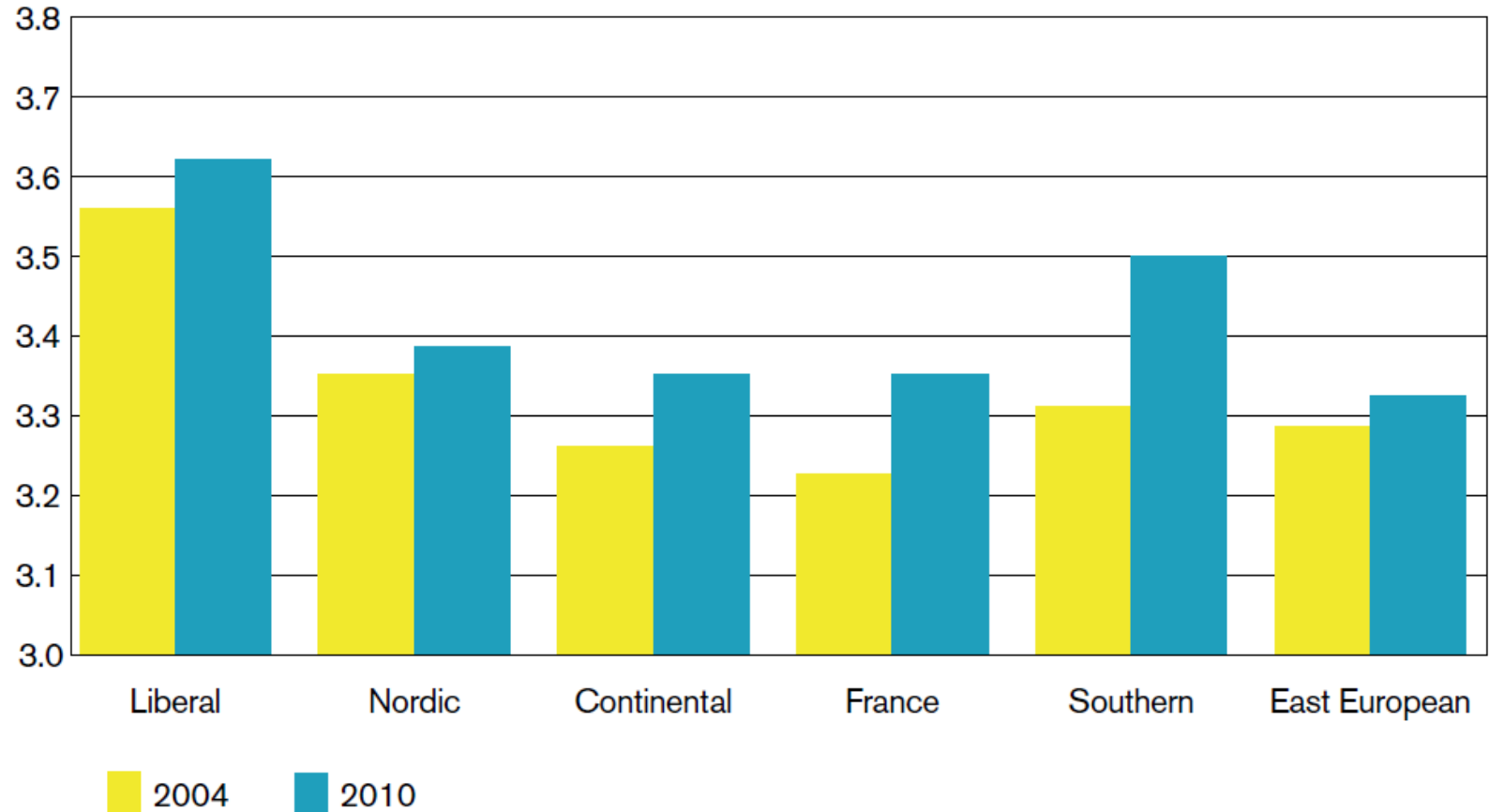
Job
insecurity



Low wage /
salary

Increase in work intensity 2004-2010: European Social Survey, 19 EU countries

Work Intensity Scores (0-5) 2004-2010

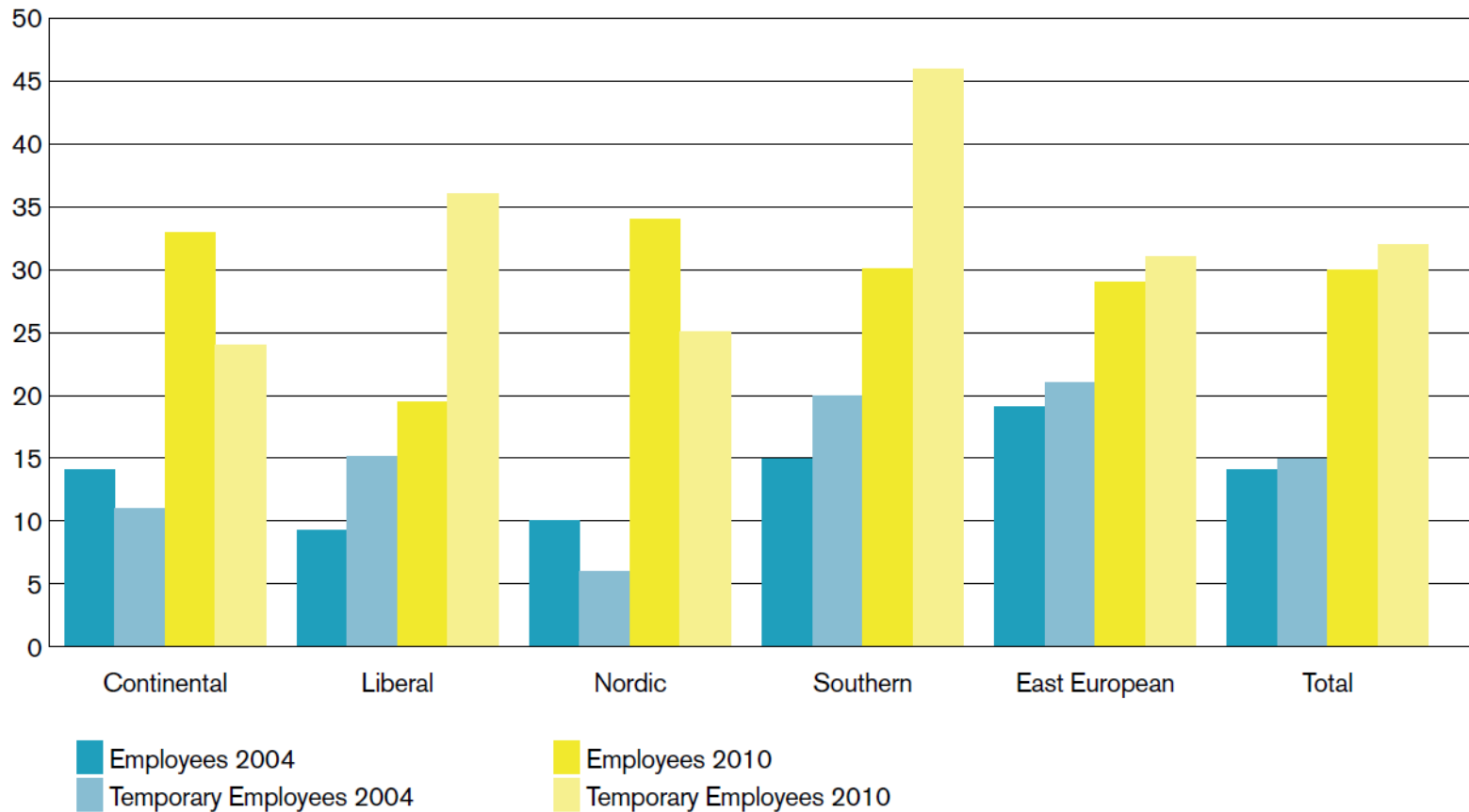


Source: Gallie D (Ed.) (2013) ESS Topline Results Series 3, European Social Survey

Job insecurity 2004-2010

European Social Survey, 19 EU countries

Figure 4 Job Insecurity among All Employees and Temporary Workers 2004-2010



Source: Gallie D (Ed.) (2013) ESS Topline Results Series 3, European Social Survey

2. Question: What is the scientific evidence linking stress at work with adverse health?

Stress occurs if a person is exposed to a **threatening demand (stressor)** that taxes or exceeds her/his capacity of successful response → **risk of loss of control**

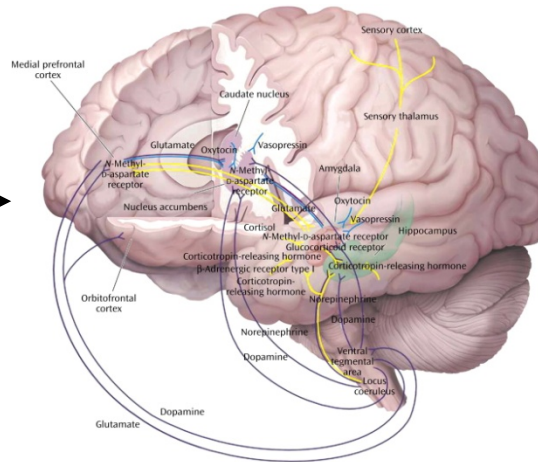
Dimensions of **stress reactions**:

- Cognitive appraisal (evaluation of threat)
- Affective response (anxiety, anger)
- Activation of stress axes in organism (SAM, HPA)
- Behavioural reaction (fight or flight) (*restricted option!*)

Critical for health:

- **Chronic stressors** requiring active coping → allostatic load; → risk of **stress-related disorders** (depression, CHD)

Working conditions as chronic stressors: How to identify 'toxic' components within complex environments?



negative
emotions



stress-related
disorders



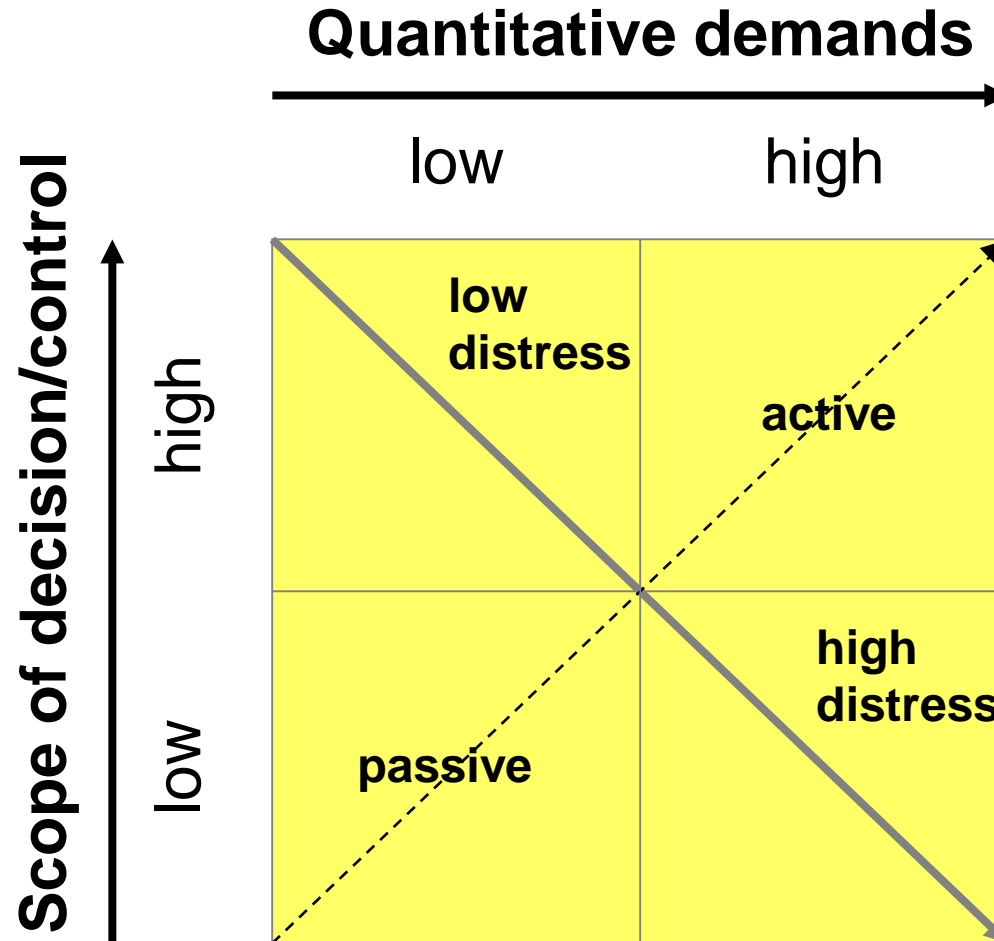
stress responses
allostatic load

Chronic psychosocial stress at work: Complementary stress-theoretical models

- **Demand-control model**
(R. Karasek, 1979;
R. Karasek & T. Theorell, 1990)
 - Focus on job task profile: high demand/low control
- **Effort-reward imbalance model**
(J. Siegrist, 1996;
J. Siegrist et al., 2004)
 - Focus on work contract: high effort/low reward
- **Organizational injustice model**
(J. Greenberg, 1990;
M. Elovainio et al., 2002)
 - Focus on unfair procedures and interactions

The demand-control model

(R. Karasek 1979; R. Karasek & T. Theorell 1990)



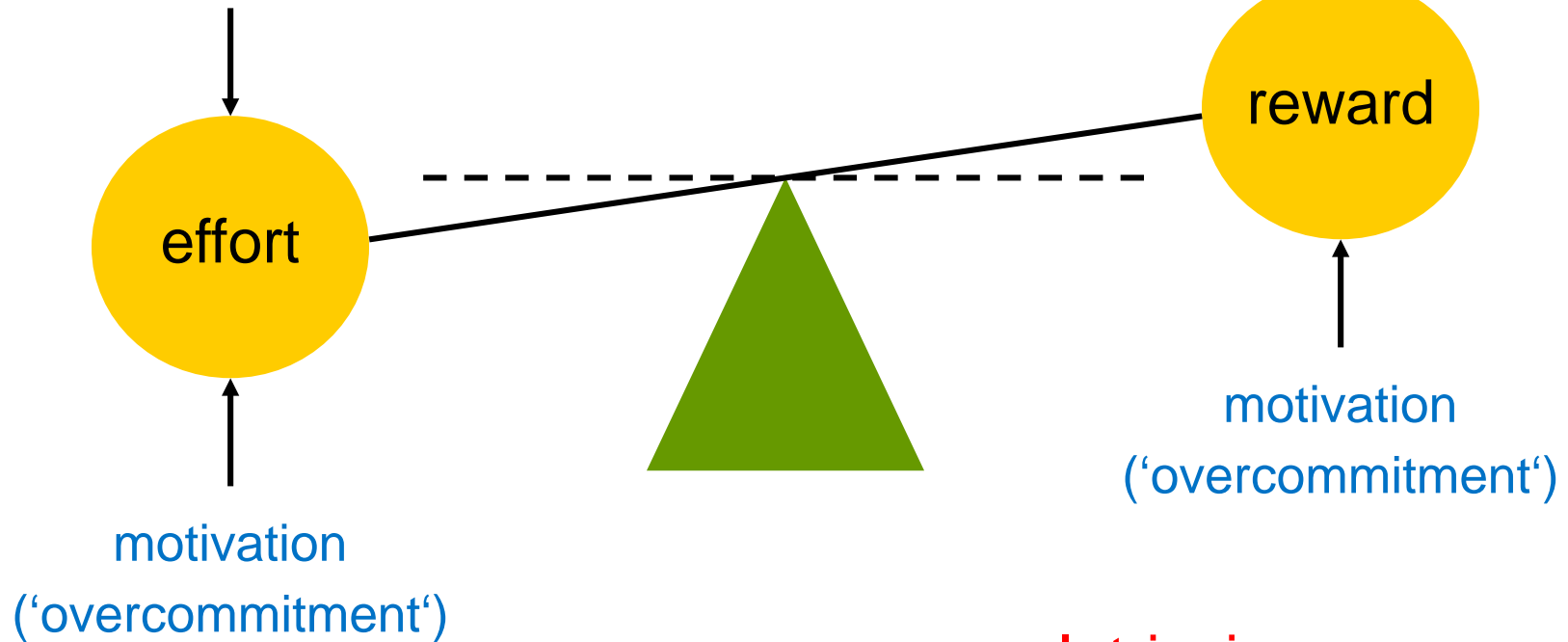
Psychometric scale of demand-control model: www.jcqcenter.org

The model of effort-reward imbalance (J. Siegrist 1996)

Extrinsic components

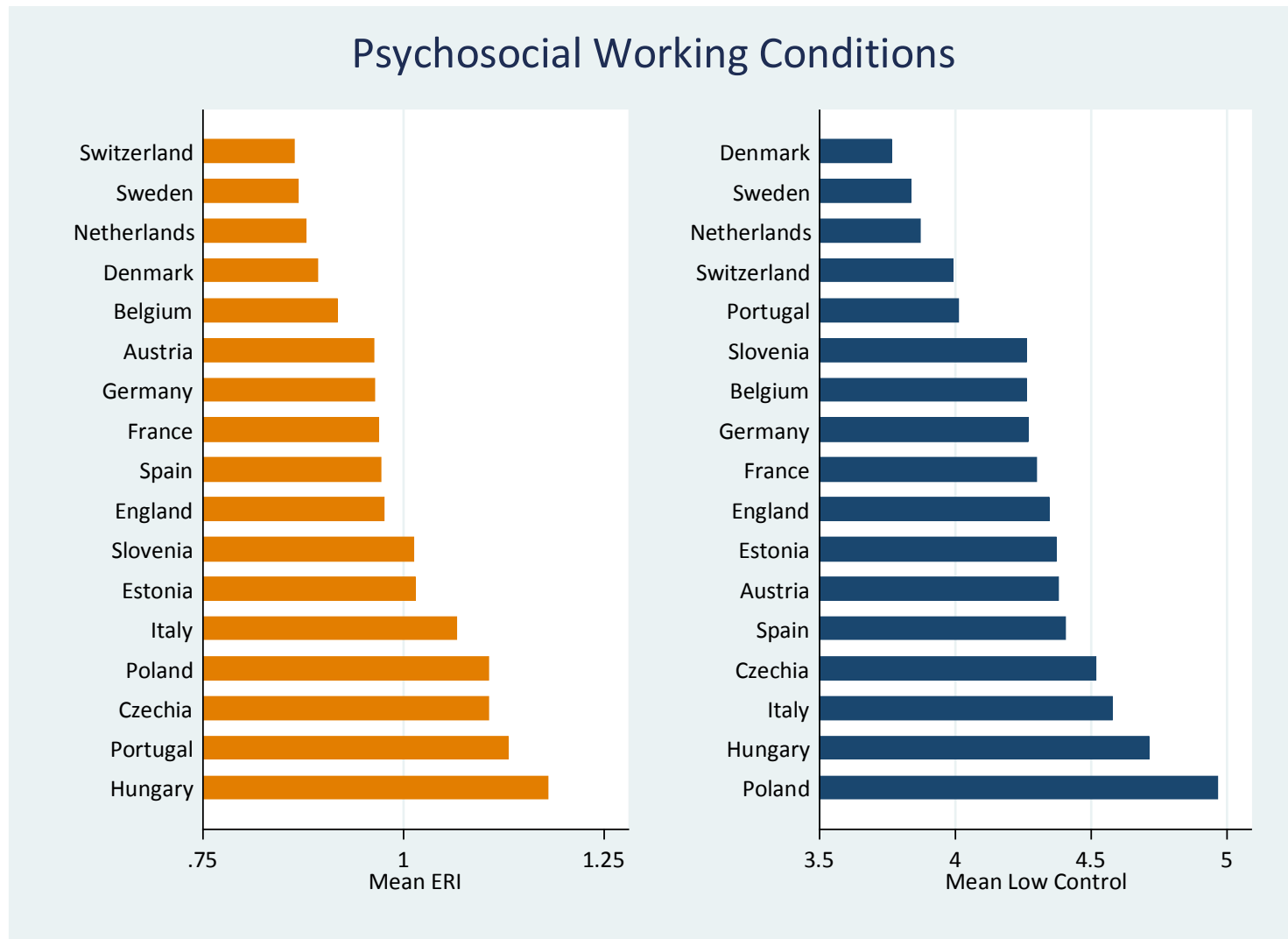
- labour income
- career mobility / job security
- esteem, respect

demands / obligations



Intrinsic component

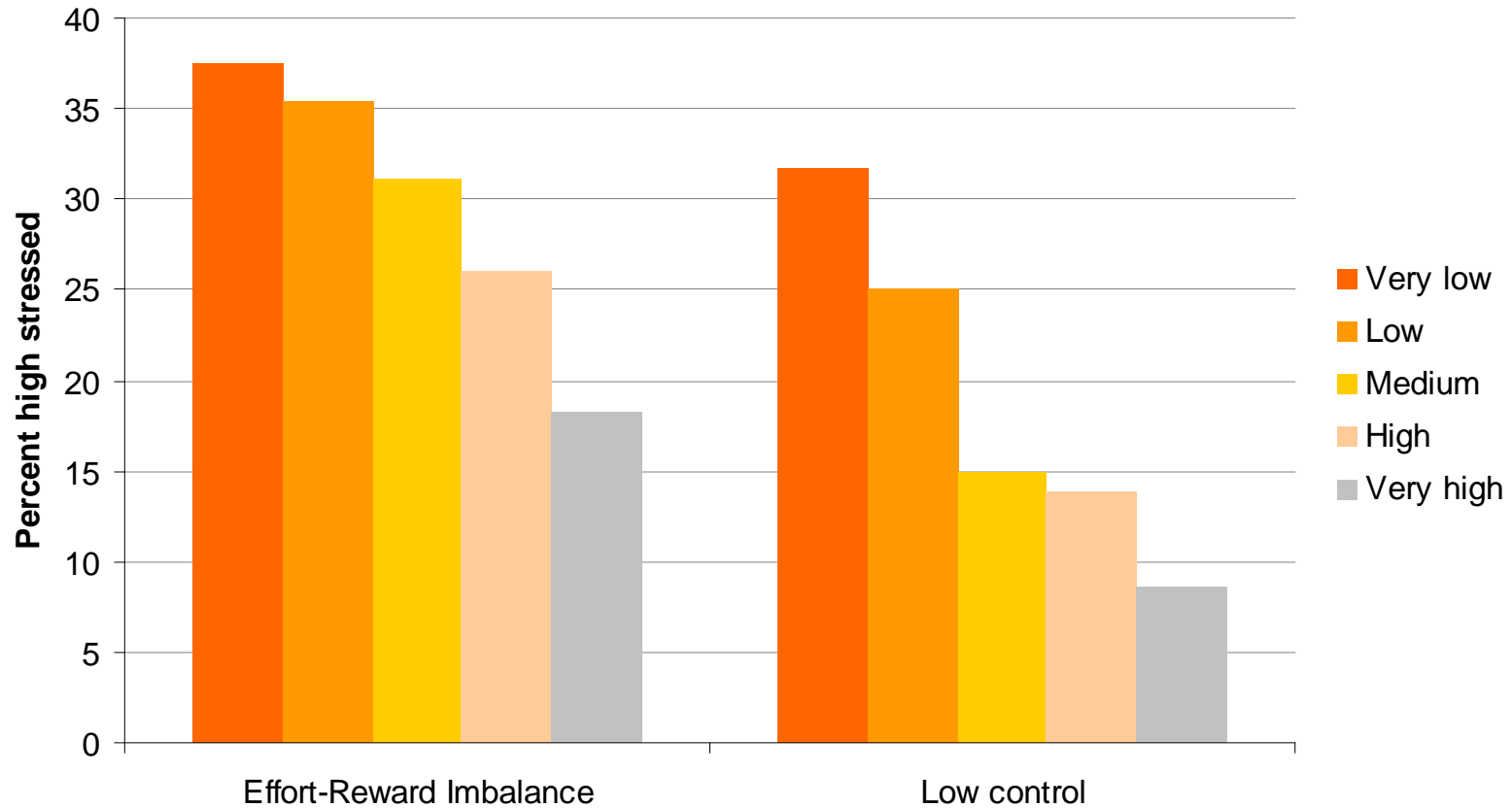
Mean level of work stress in 17 European countries (SHARE, ELSA, n = 14 254, aged 50-64)



Source: T. Lunau et al. (2013): Unpublished results

The social gradient of work stress in the European workforce (age 50-64): SHARE-study

Social gradient of work stress



Source: Wahrendorf M et al. (2013) European Sociological Review 29: 792-802

Scientific evidence from prospective cohort studies: Demand-control and effort-reward-imbalance models

- ***Depression:***

- ~ 30 studies (Europe, USA, Canada, Japan):

People exposed to stress at work: mean increase of relative risk: **80% = OR 1.8** (95% CI 1.1-3.1)

- ***Coronary heart disease:***

- ~ 20 studies (Europe, USA):

People exposed to stress at work: mean increase of relative risk: **40% = OR: 1.4** (95% CI 1.2-1.6)

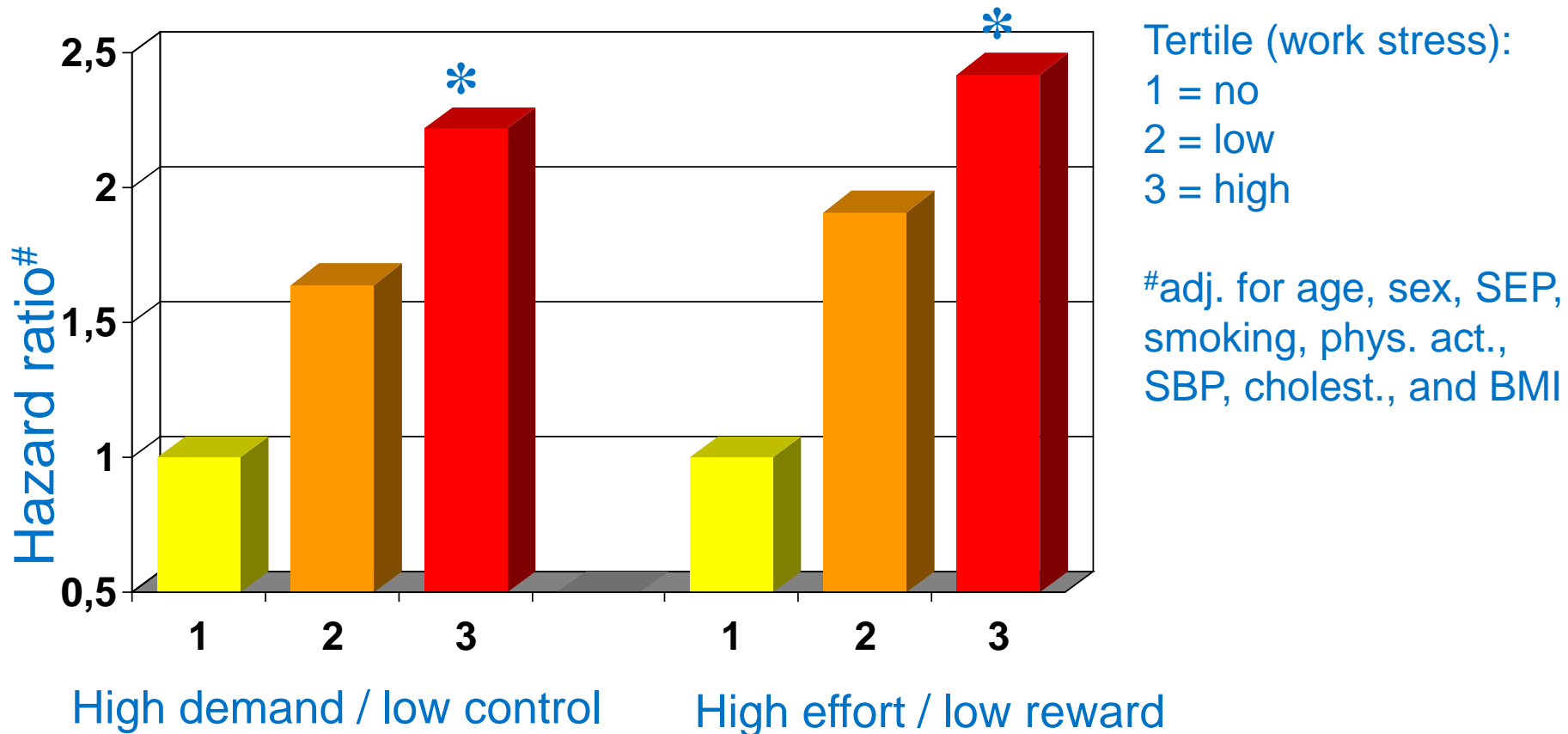
- ***Additional evidence of elevated health risks:***

Metabolic syndrome / type II diabetes

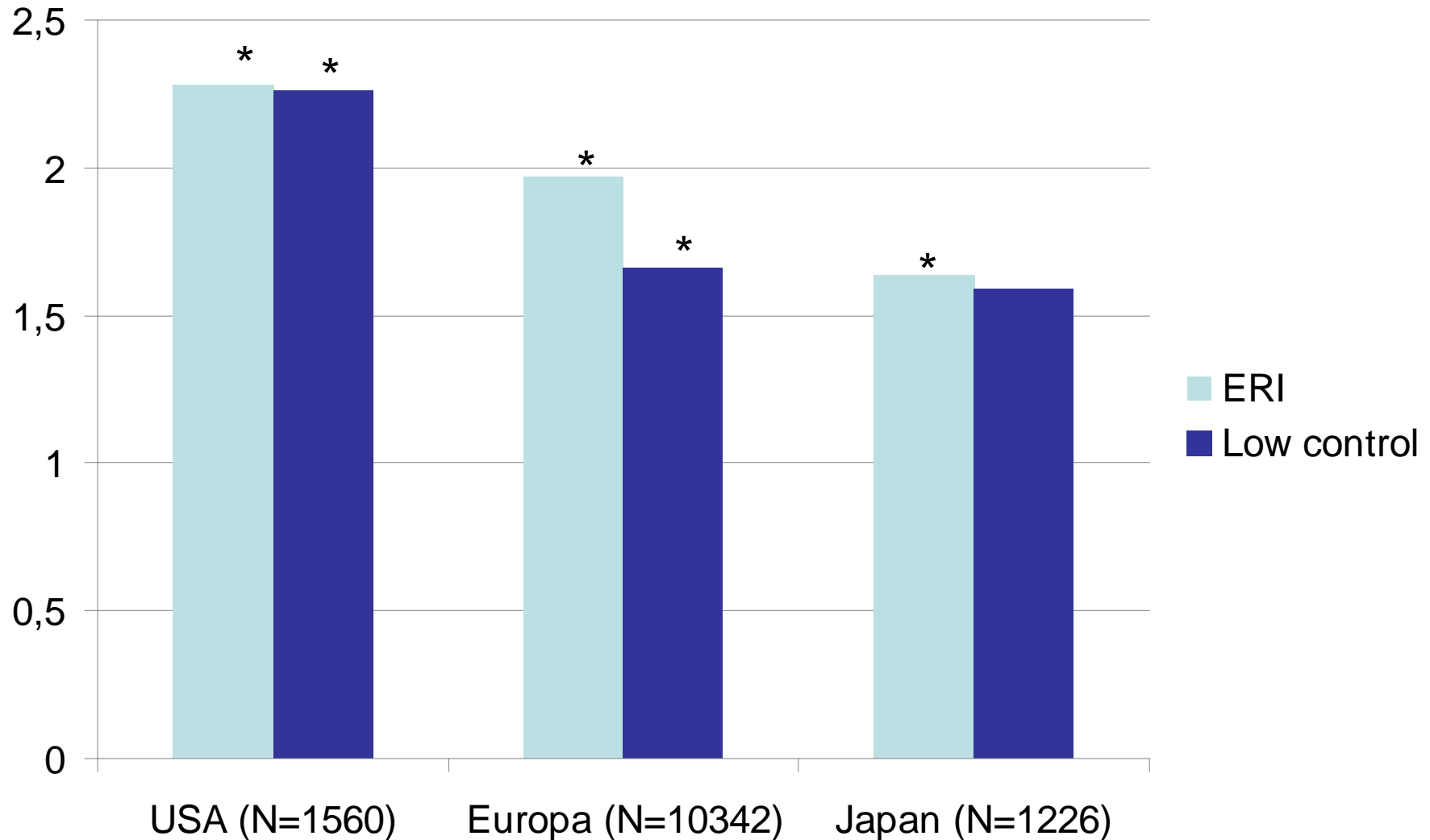
Alcohol dependence

Musculoskeletal disorders

Work stress and cardiovascular mortality: Finnish Cohort Study, n = 812 employees



Psychosocial stress at work and depressive symptoms: 13.128 employed men and women 50-64 yrs. from 17 countries in three continents (SHARE, ELSA, HRS, JSTAR)



Source: J. Siegrist et al (2012) Globalization and Health 8:27.

3. Question: What can be done at organizational level to manage stress and improve healthy work?

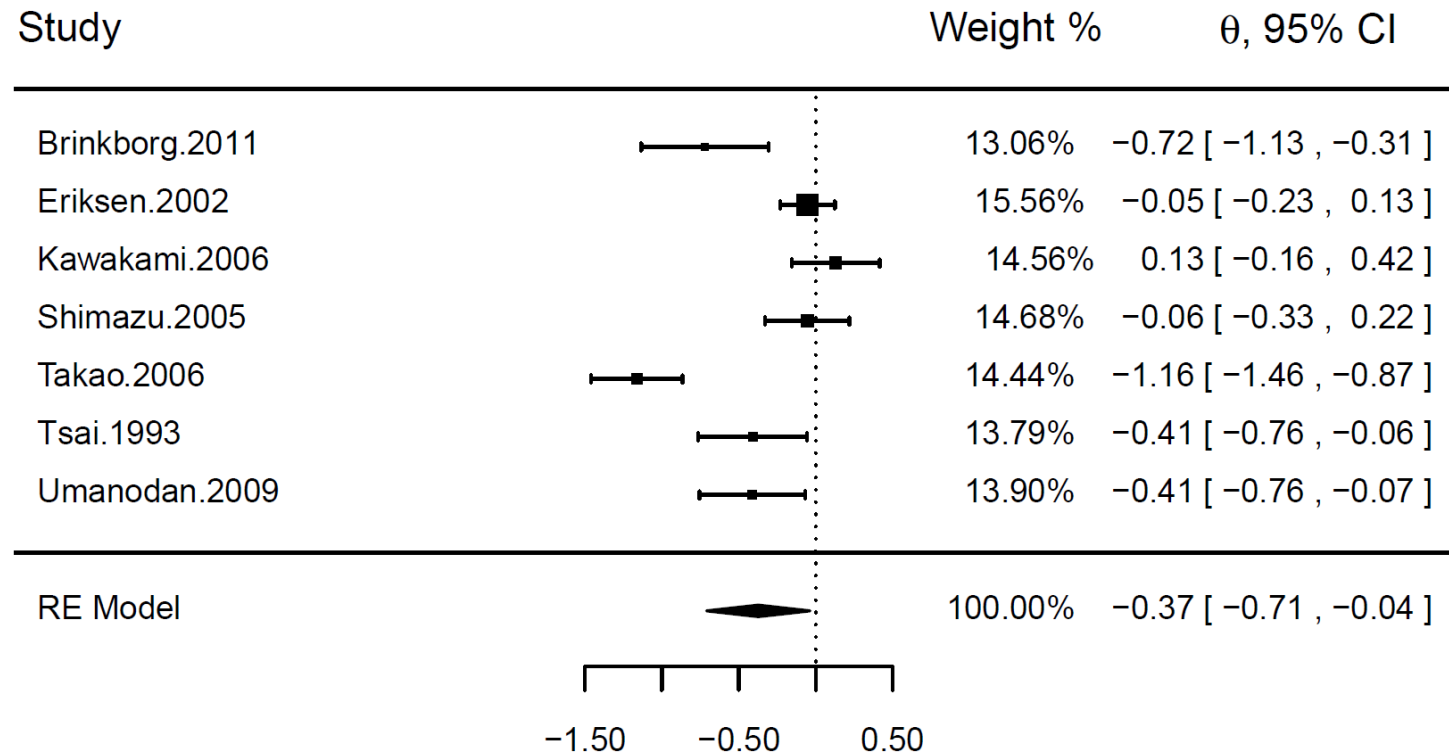
- Provide evidence of a **business case**
- Provide **shared commitment** from management and employees
- Provide **available expertise** (e.g. occupational safety & health) and equipment
- **Monitor** working conditions and employees' health
- **Develop and implement programmes**, invest in improvements, consult models of best practice
- **Ensure continuity**, evaluate outcomes, build networks

Develop and implement Healthy Workplace Programs

- **Personal level:** Stress prevention programs
- **Interpersonal level:** Leadership training; communication skills;
- **Structural level:** Organizational/personnel development (based on work stress models)
 - Job enrichment/ enlargement (autonomy, control, responsibility)
 - Skill utilization / active learning
 - Participation / team work and social support
 - Culture of recognition
 - Fair wages/ gain-sharing
 - Continued qualification/ promotion prospects

Personal level: Effects of worksite stress prevention programs: Meta-analysis

Perceived stress



Interpersonal level: Leadership training of managers and stress hormone excretion in subordinates

	Intervention group		Control group	
	Baseline	After 1 year	Baseline	After 1 year
Mean Cortisol (nmol/l)	387.2	 345.2 *	390.4	 391.3
Mean decision latitude (range 2-8)	6.0	 6.1 **	6.2	 5.7

Interaction group X time: *p = .05, **p = .02

Structural – level: Organizational intervention in a Canadian hospital vs. control hospital*

Means at t2 adj. for t0

Variable	experimental - control hospital		p
Demand	11.9	12.6	.008
Control	70.0	68.7	.051
Social support	23.7	23.0	.011
Reward	31.2	30.2	.003
Effort-reward imbal.	1.0	1.1	.001
Work-rel. burnout	43.2	48.3	.003

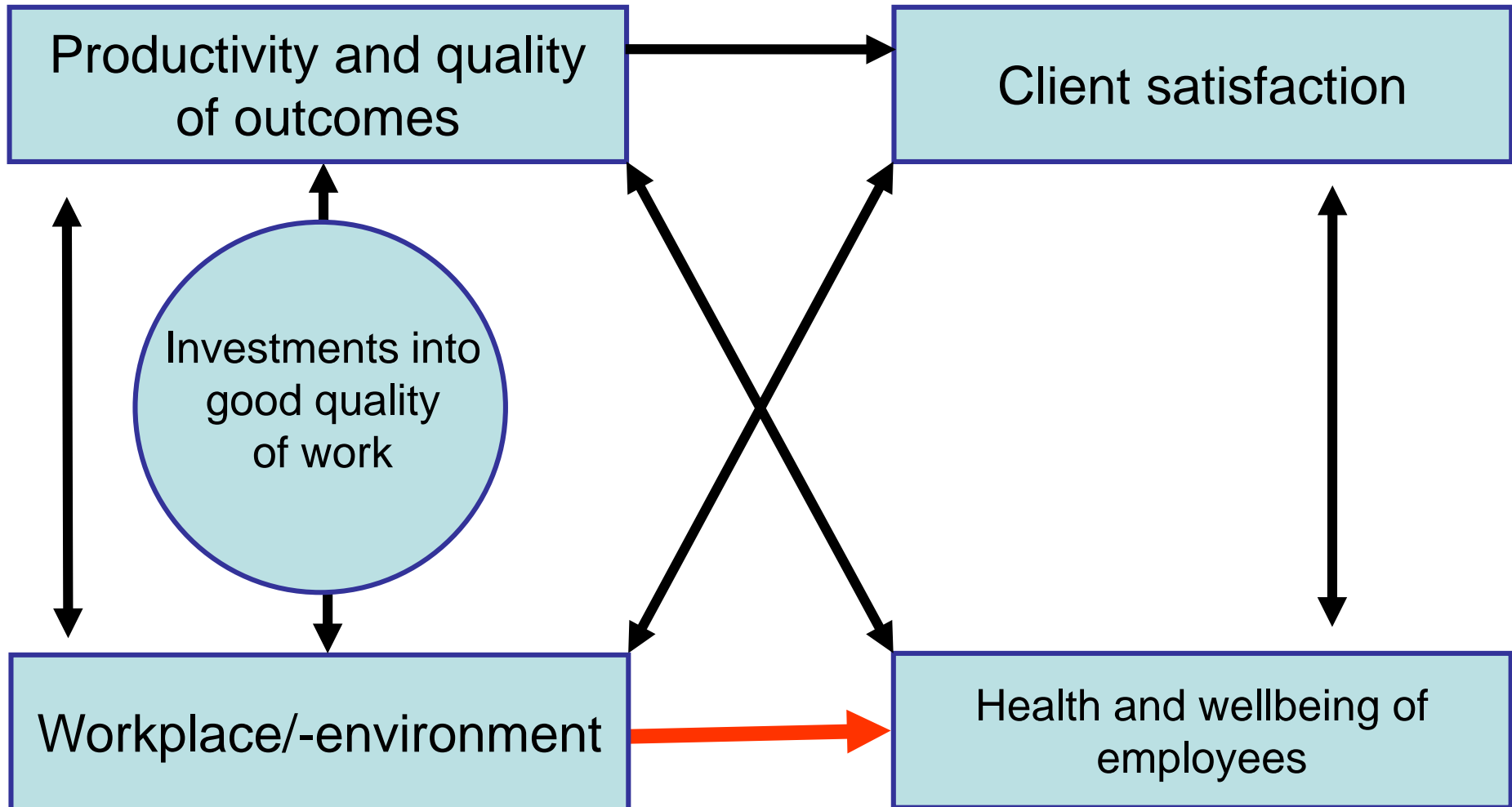
*36 month-follow-up, two Canadian hospitals, N=248 (intervention) vs. 240 (control hospital) (ANCOVA, adj. for baseline values)

Source: R. Bourbonnais et al. (2011), Occup Environ Med, 68: 479-486.

Seven practices of successful organizations: Reconciling health promotion with economy!

1. Employment security
2. Selective hiring of new personnel
3. Self-managed teams; decentralization of decision making
4. Comparatively high compensation contingent on performance
5. Extensive training
6. Reduced status distinctions and barriers
7. Extensive sharing of financial and performance information

The Sirdal Model of Improved Work





Thank you!