

Development of a risk assessment tool for adverse outcomes of occupational stress



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Introduction: work-related stress

- one of the biggest health and safety challenges at the level of employees, organisations and national economies (Esener, Eurofond, OSHA)
- present risks for:
 - physical and psychological health of employees
 - sick leave (absenteeism; [1])
 - reduced workplace productivity (presenteeism; [2]),
 - turnover [3]
 - burnout [4]
 - work-to-family conflict [5]

[1] Johns, G. (2003). How methodological diversity has improved our understanding of absenteeism from work. *Human resource management review*, 13(2), 157-184. [2] Johns, G. (2010). Presenteeism in the workplace: A review and research agenda. *Journal of Organizational Behavior*, 31, 519-542. [3] Bergerman, L., Corabian, P. in Harstall, C. (2009). Effectiveness of organizational interventions for the prevention of workplace stress. Canada: Institute of Health Economic. [4] Maslach, C., Schaufeli, W.B., Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397-422. [5] Brewer, E. W. & Shapard, L. (2004). Employee burnout: A meta-analysis of the relationship between age or years of experience. *Human Resource Development*, 3(2), 102-123.

Introduction: risk factors

WORK-RELATED

- from **job characteristics**
(e.g. work content, workplace, overload, work schedule, control over work, employee's qualification, participation in decision making, pay),
- from **work environments and organisation**
(e.g. possibilities for career development, role of employee in the organisation, interpersonal relations, organisational climate),

NON- WORK-RELATED

- socio-demographic characteristics of an employee,
- economic background,
- family relations,
- health status,
- lifestyle,
- quality of life,
- technological development,
- market changes

Introduction: Slovenia's characteristics

- compared to the EU average
 - higher levels of absenteeism, lower job satisfaction level, more physical complaints (back pain, muscle pain, headache) [6],
 - low flexibility of labour market [7,8],
 - unhealthy lifestyle (unhealthy diet, insufficient physical activity and smoking) [9],
 - one of the highest suicide rates [6],
 - alcohol abuse and alcohol-related mortality and health problems [10],

[6] Eurofond (2005). Facts sheet. Fourth European Working Conditions Survey. [7] European Comission, Eurostat (2011). Part-time employment as a percentage of the total number of employees for a given sex and age group. [8] European Comission, Eurostat (2011). Temporary employees as a percentage of the total number of employees for a given sex and age group. [9] Hlastan-Ribič, C., Djomba, J. K, Zaletel-Kragelj, L., Maučec-Zakotnik, J. in Fras, Z. (ur.) (2010). Rezultati raziskave Dejavniki tveganja za nenalezljive bolezni pri odraslih prebivalcih Slovenije 2008. Ljubljana, Inštitut za varovanje zdravja. [10] WHO Regional Office for Europe (2011). European health for all database. Available at: <http://data.euro.who.int/hfadb/> /27.10.2011/

Aim

- to develop a comprehensive assessment tool
 - consisted of work-related and non-work-related risk factors associated with job stress and its adverse negative outcomes such as absenteeism (A), presenteeism (P), turnover (T), burnout (B) and work-family conflict (WFC)
 - adapted to Slovenian socio-cultural context
- to identify most significant work and non-work related risks that contribute to the development of A, P, T, B, WFC

Methods

3.1 Establishing a Preliminary List of Risks, Related to A, P, T, B, WFC

- a) A review of relevant international research literature on workplace stress;
- b) A literature review of Slovenian publications from 2004 to 2010 addressing workplace stress;
- c) An analysis of socio-demographic, health, economic statistical indicators by Slovenian statistical regions from 2004 to 2010;
- d) The focus group
 - 7 qualified experts
 - proposed risks
 - together with previous phases 186 risk factors
 - rated on a five-point Likert scale (1 = very unimportant to 5 = very important) the influence on A, P, T, B, WFC
 - for each risk M (weight) and SD (consensus)
 - more important risk factors ($M > 2$) included in the second questionnaire

Methods

3.2 Establishing a Final Priority List of Risks

- second and third round
- an online survey
- expanded group of 23 experts
- reassessed the most prominent risks from the first round
- a prioritised list of 130 risks related to A, P, T, B, WFC (high *M*, low *SD*, high discriminativity)
- transformed into self-rating items
- qualitative analysis: 17 categories of risk factors (10 work-related , 7 non-work-related)

Results

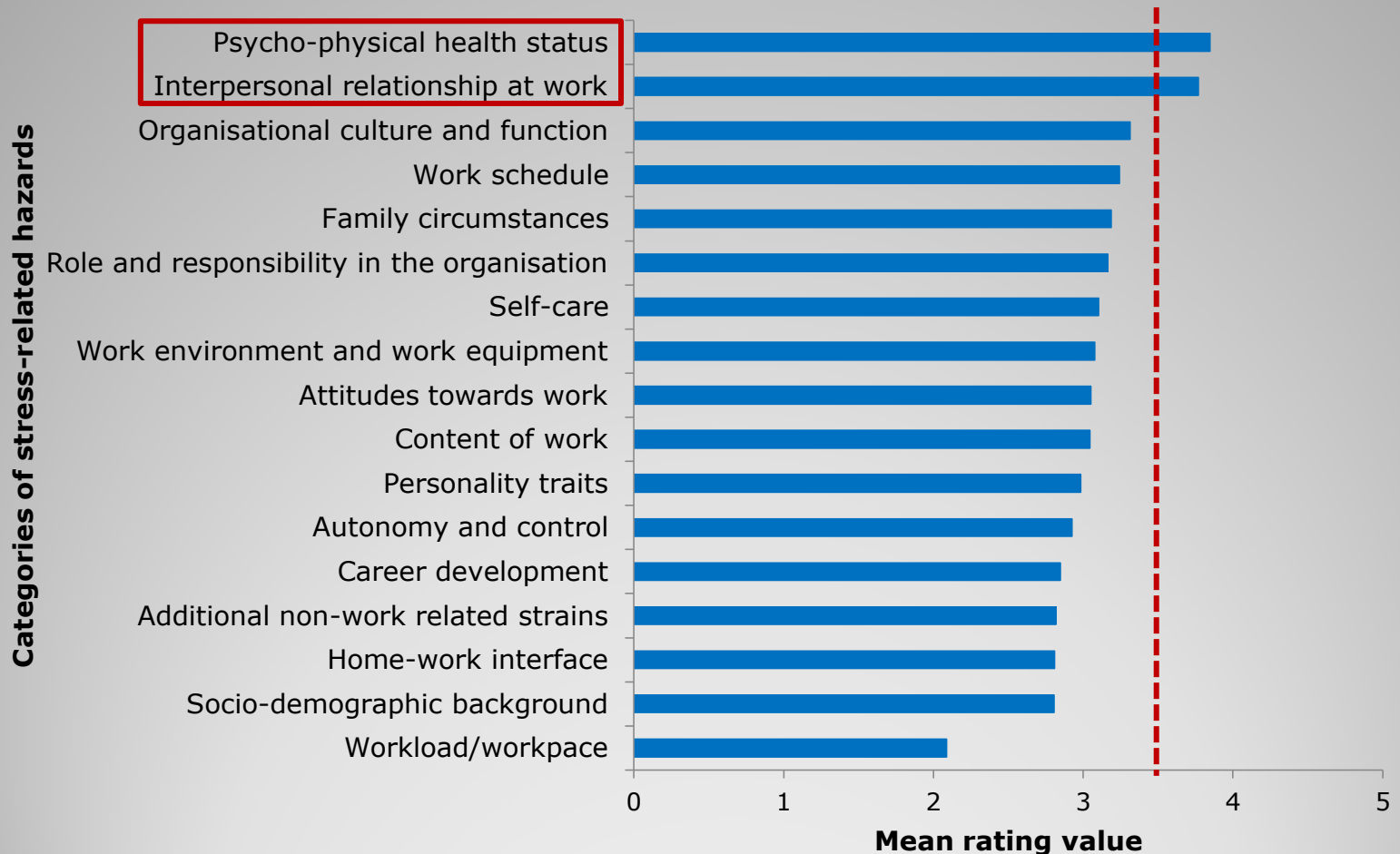
Category	Description
CONTENT OF WORK	Monotonous work, short work cycles, fragmented or meaningless work, underuse of skills, high uncertainty, continuously working with other people.
WORKLOAD/WORKSPACE	Work overload or underload, lack of control over pacing, high levels of time pressure, constant deadlines.
WORK SCHEDULE	Shift working, rigid work schedules, unpredictable hours, long or unsociable hours.
AUTONOMY AND CONTROL	Low participation in decision making, lack of control over workload, work pace, working hours.
WORK ENVIRONMENT AND WORK EQUIPMENT	Problems regarding reliability, availability, suitability and maintenance or repair of both equipment and facilities; inadequate working conditions due to lack of proper working space, poor lighting, and noise.
ORGANISATIONAL CULTURE AND FUNCTION	Poor communication, low levels of support for problem-solving and personal development, lack of definition of organisational objectives.
INTERPERSONAL RELATIONSHIP AT WORK	Social or physical isolation, poor relationships with superiors, interpersonal conflict, lack of social support.
ROLE AND RESPONSIBILITY IN THE ORGANISATION	Role ambiguity and role conflict, responsibility for people.
CAREER DEVELOPMENT	Career stagnation and uncertainty, under or over promotion, poor salary, job insecurity, job uncertainty, low social value to work.
HOME-WORK INTERFACE	Conflicting demands of work and home, low support at home, dual career problems.
FAMILY CIRCUMSTANCES	Single parent family, multi-generational family, relationship problems with spouse and children, changes in family
PSYCHO-PHYSICAL HEALTH STATUS	Physical or psychological illness or proneness to illness.
PERSONALITY TRAITS	Conflict between work and personal values, need for self-affirmation, perfectionism, fear of making mistakes, disorganisation, overestimating one's abilities, indulgence, bad working habits.
ATTITUDES TOWARDS WORK	Work is important value, inability to adapt to new conditions, the need to prove oneself at work, unhealthy strategies for coping with work stress.
ADDITIONAL NON-WORK RELATED STRAINS	Precarious work, being engaged in other works besides job, additional education/training besides job, financial support of family members, caring for family member with a long term illness
SELF- CARE	Unhealthy life style, unused vacation or sick leave, lack of time for oneself, friends, leisure activities.
SOCIO-DEMOGRAPHIC BACKGROUND	Bad living conditions, very low income, few traffic connections between work and home, difficult access to kindergartens and health institutions.

Table 1. List of categories of stress related hazards with corresponding risk factors

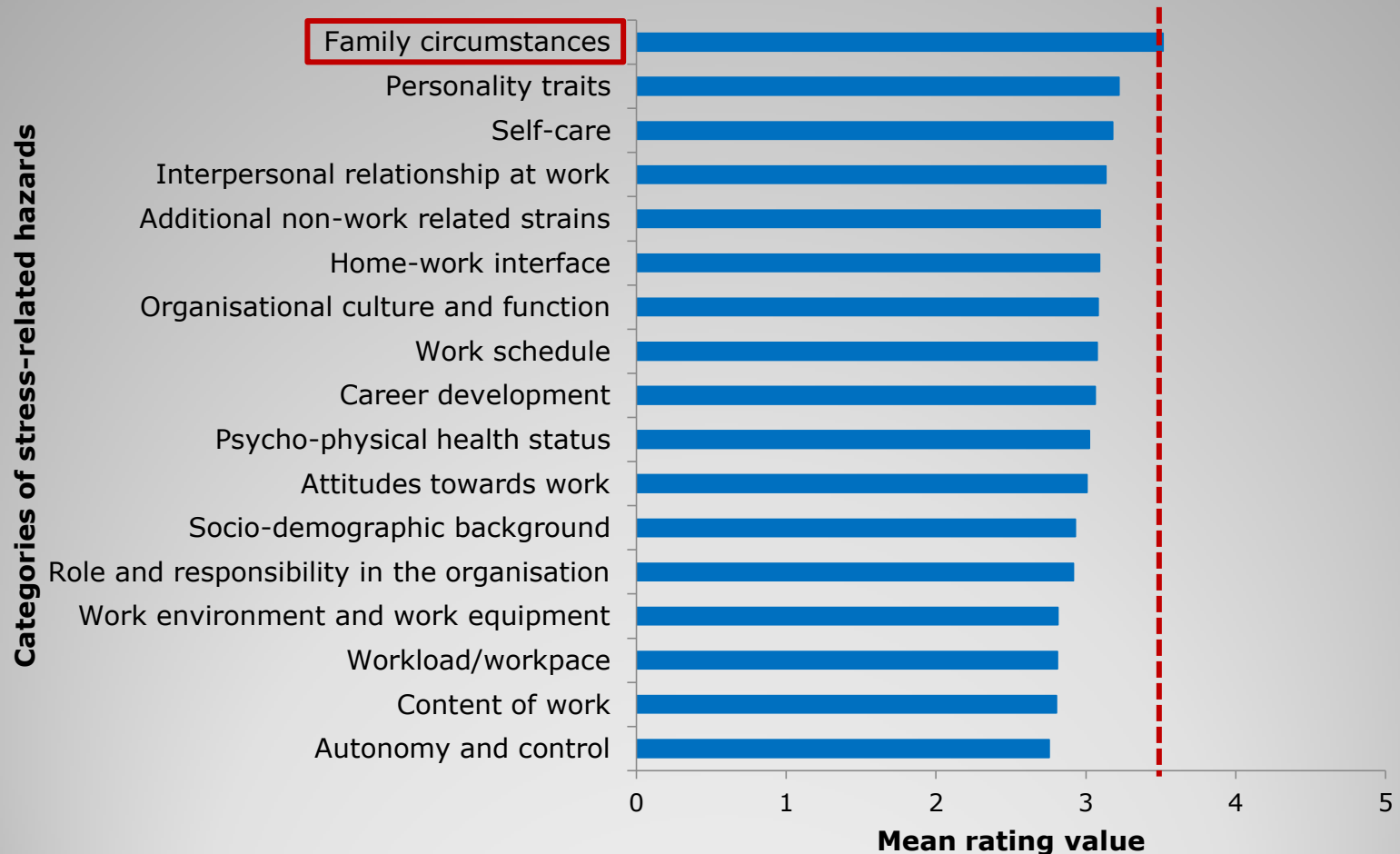
Results

- interpretation of a burden that different categories of stress-related hazards have on development of stress-related negative outcomes (A, P, T, B and WFC):
 - low burden ($M < 2.5$);
 - medium burden ($2.5 < M < 3.5$);
 - high burden ($M > 3.5$).

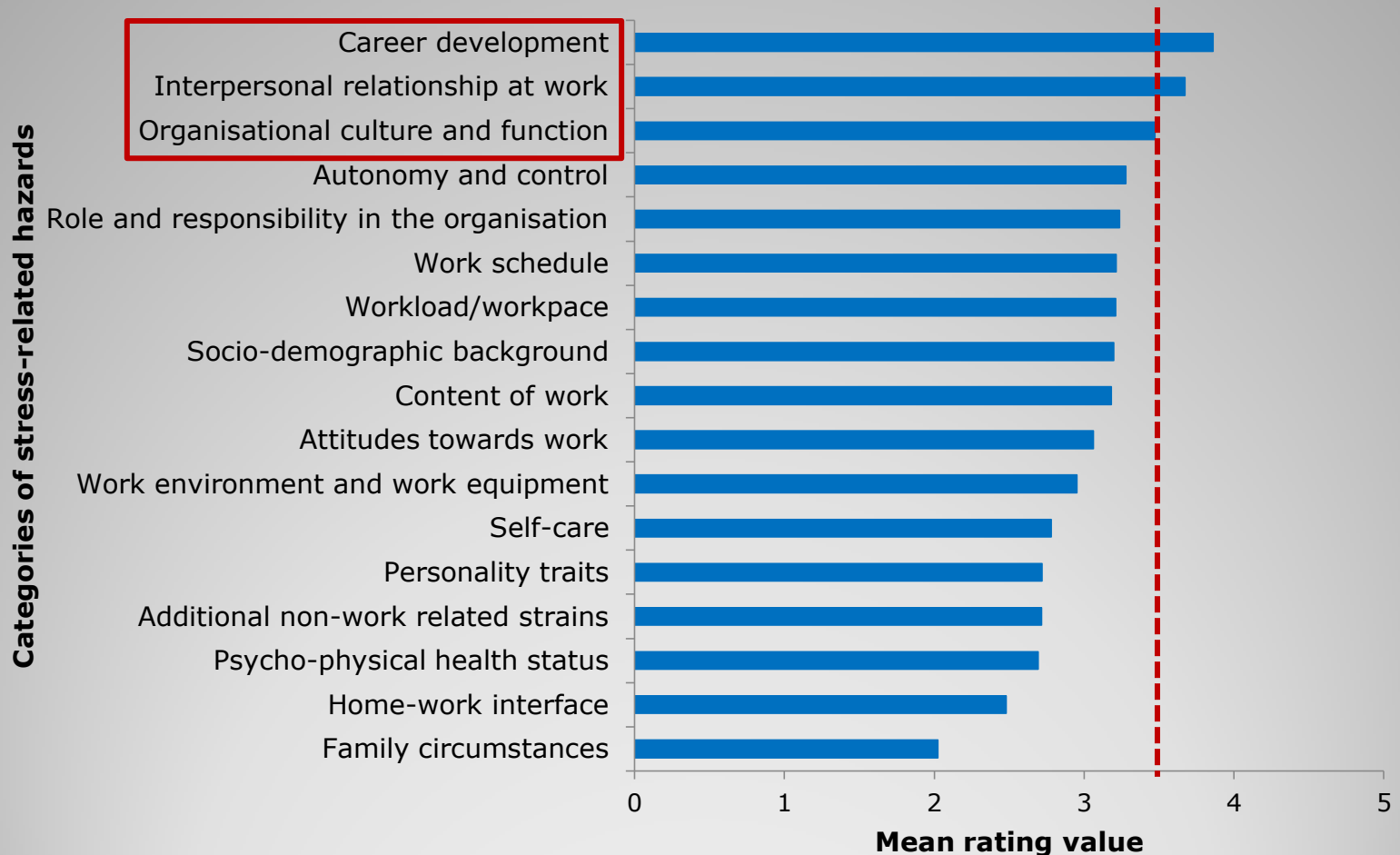
Results: risk factors for Absenteeism



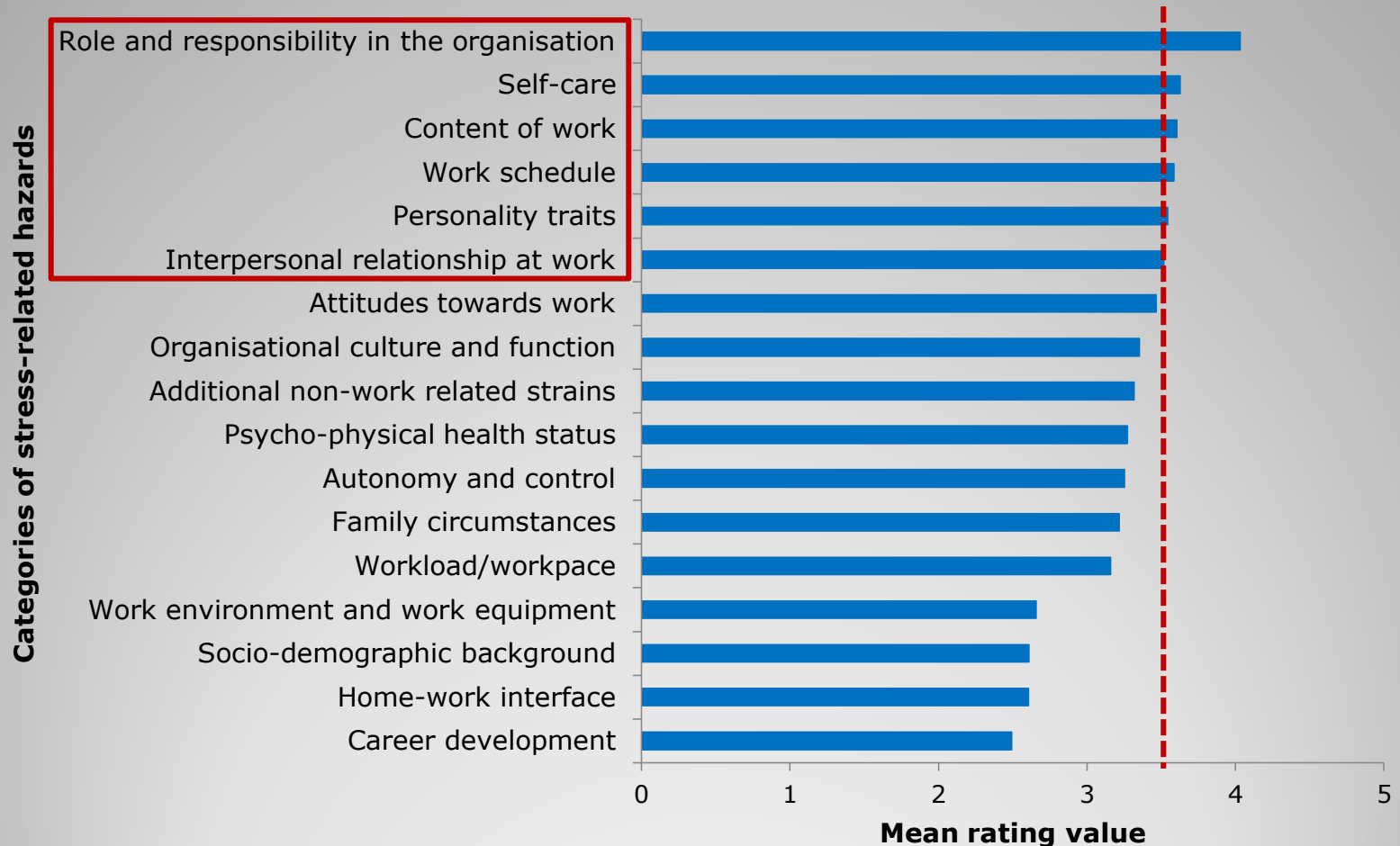
Results: risk factors for Presenteeism



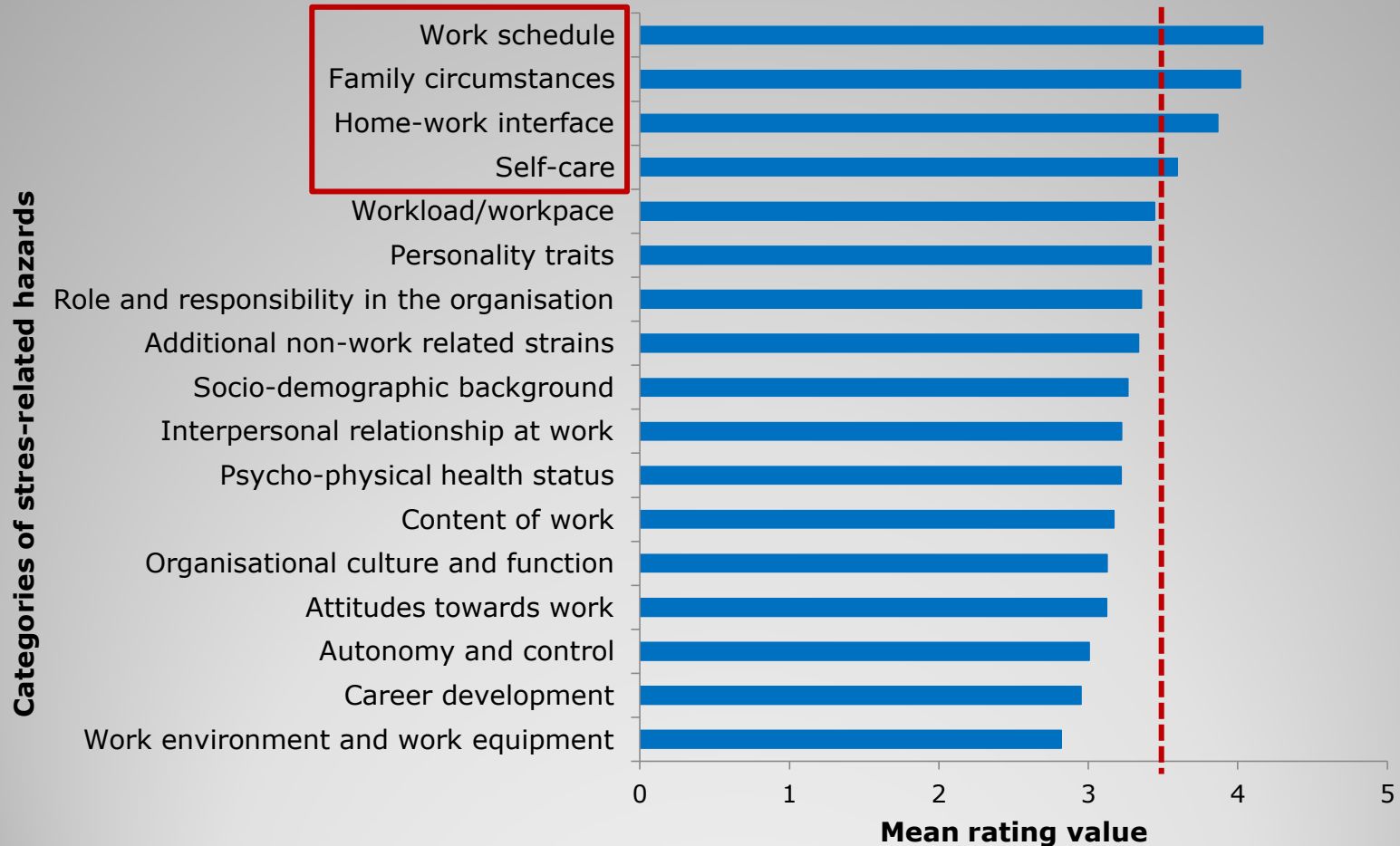
Results: risk factors for Turnover



Results: risk factors for Burnout



Results: risk factors for Work-family conflict



Conclusions

- Development of a comprehensive assessment tool:
 - consists of 130 risk factors in 17 categories
 - work-related and non-work-related
 - associated with job stress and its adverse negative outcomes (A, P, T, B, WFC)

Conclusions

- The most significant recognized risks:
 - Interpersonal relations on the workplace (A, P, T, B),
 - Career development (T),
 - Work schedule (A, T, B, WFC),
 - Role and responsibility in the organization (A, T, B, WFC),
 - Health status (A),
 - Personality characteristics (P, B, WFC),
 - Family situation (A, P, WFC),
 - Self care (A, P, B, WFC).
- Next step: validation of the tool in different work settings to determine its ability to identify potential risk factors associated with harmful work-related outcomes and monitor changes and trends relating to workplace stress

Thank you for your attention



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