

Psychosocial factors and musculoskeletal disorders in a public sector population

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- Evaluation of the influence of occupational psychosocial factors
 - on the presence of neck and shoulder complaints (NSC)
 - on the presence of low back complaints (LBC)

Methods (1)

- Cross-sectional questionnaire study
- Study population
 - public sector
 - administrative workers, library workers, professional fire fighters, teachers, technical personnel, cleaning personnel, social service, child care, cleaning at home, nursing personnel, nursing at home, kitchen personnel and harbour personnel

- NSC:
 - 1281 subjects (83.8% response rate)
 - 1143 at least 12 months seniority
 - 27 subjects excluded (earlier neck shoulder trauma)
 - **final study population: 1116 (73.0%)**
- LBC:
 - 1277 subjects (83.5% response rate)
 - 1218 at least 12 months seniority
 - 114 subjects excluded (earlier low back trauma)
 - **final study population: 1104 (72.2%)**

- Dependent outcome variables
 - NSC last 12 months
 - LBC last 12 months

- Standardised Nordic Questionnaires for the Analysis of Musculoskeletal Symptoms

- Exposure to psychosocial work factors
- Copenhagen Psychosocial Questionnaire (COPSOQ)
 - theory based, no single model
 - COPSOQ II + ‘degrees of freedom’
 - 23 dimensions
 - scores 0-100 (0-10 in regression analysis)
 - psychosocial “job profile”

COPSOQ dimensions

quantitative demands
work pace
cognitive demands
emotional demands
demands for hiding emotions
role conflicts
job insecurity

degrees of freedom
role clarity
predictability
meaning of work
variation of work
possibilities for development
influence at work

quality of leadership
social support from supervisor
social support from colleagues
social community at work
commitment to the workplace
horizontal trust
rewards
vertical trust
justice and respect

- Other variables (NSC):
 - physical workload
 - full/part time work
 - age, gender
 - number of children at home, taking care of disabled people
- Other variables (LBC):
 - physical workload
 - full/part time work
 - age, gender
 - BMI
 - number of children at home, taking care of disabled people

- Multivariate logistic regression analysis (COPSOQ scales 0 – 10)
- OR (95% CI) for the presence of NSC and LBC in the past 12 months

Population characteristics

- 68.5 % women (n=765)
- mean age (yrs): 43.5 (SD 9.9)
- age range (yrs): 20 – 68

- 55.2 % neck shoulder complaints not due to an accident (n=616)

COPSOQ Mean values (SD) (1)

● quantitative demands	42.0 (19.3)
● work pace	61.5 (18.2)
● cognitive demands	59.6 (20.0)
● emotional demands	44.7 (23.2)
● demands for hiding emotions	65.5 (18.2)
● role conflicts	34.2 (19.4)
● job insecurity	24.2 (26.4)

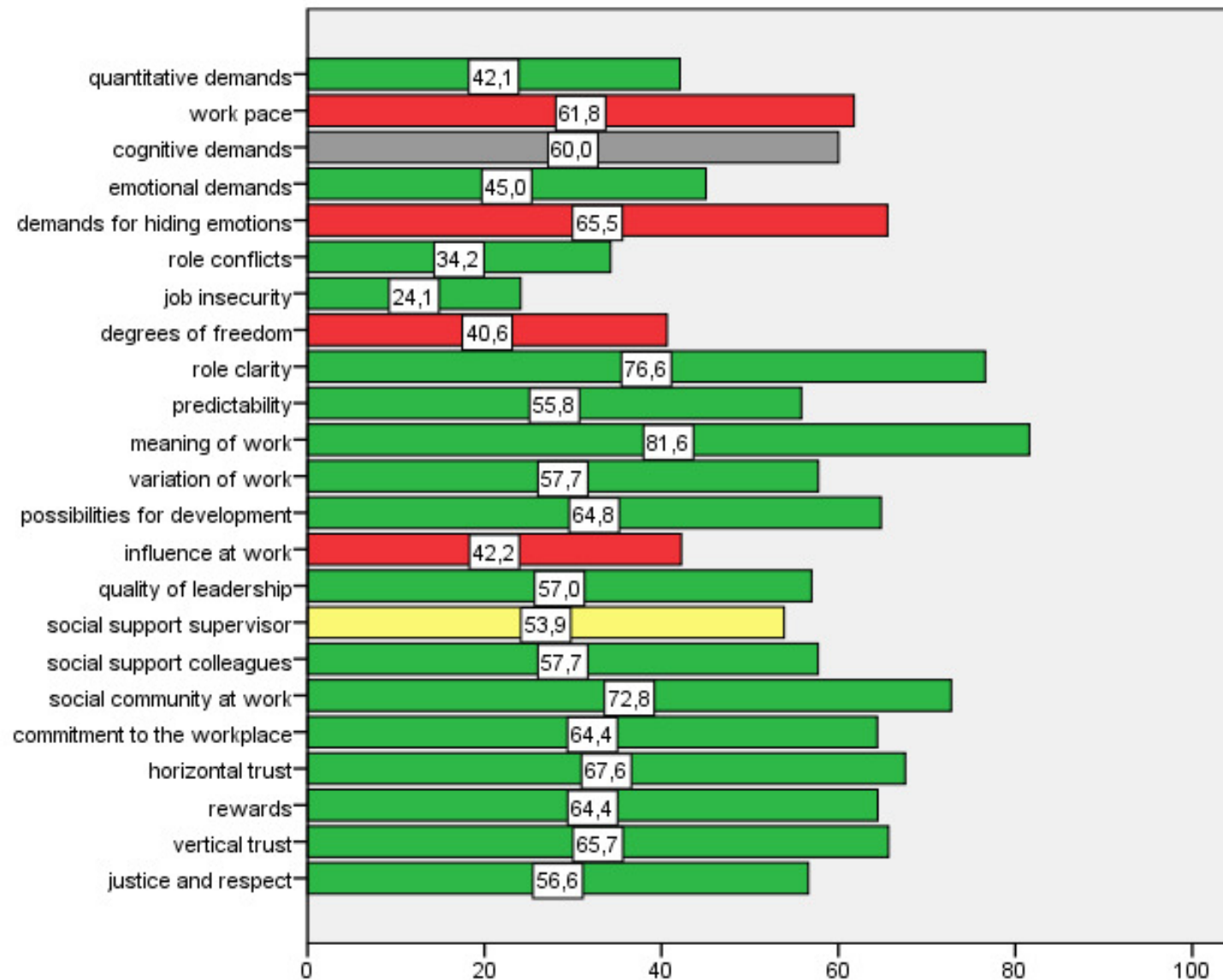
COPSOQ Mean values (SD) (2)

- degrees of freedom 40.6 (20.6)
- role clarity 76.4 (17.6)
- predictability 55.6 (23.5)
- meaning of work 81.6 (17.5)
- variation of work 57.6 (23.5)
- possibilities for development 64.6 (21.3)
- influence at work 42.2 (17.2)

COPSOQ Mean values (SD) (3)

- quality of leadership 56.8 (23.9)
- social support from supervisor 53.6 (21.4)
- social support from colleagues 57.6(18.4)
- social community at work 72.8 (18.5)
- commitment to the workplace 64.4 (18.0)
- horizontal trust 67.6 (19.1)
- rewards 64.1 (23.8)
- vertical trust 65.5 (18.9)
- justice and respect 56.4 (21.3)

Results NSC: COPSOQ - profile



Results NSC

Multivariate logistic regression analysis OR (95% CI) for the presence of NSC in the past 12 months (n=1043)

- gender (F vs. M) 2.23 (1.69-2.93)
- quantitative demands 1.12 (1.04-1.20)
- emotional demands 1.07 (1.01-1.14)
- influence at work 0.92 (0.85-1.00)
- quality of leadership 0.91 (0.86-0.96)

Results LBC

Population characteristics

- 68.7 % women (n=758)
- mean age (yrs): 43.5 (SD 9.9)
- age range (yrs): 20 – 68

- 53.9 % low back complaints not due to an accident (n=595)

COPSOQ Mean values (SD) (1)

● quantitative demands	42.1 (19.2)
● work pace	61.4 (18.1)
● cognitive demands	59.7 (20.0)
● emotional demands	44.8 (23.2)
● demands for hiding emotions	65.4 (18.3)
● role conflicts	34.3 (19.5)
● job insecurity	24.2 (26.4)

COPSOQ Mean values (SD) (2)

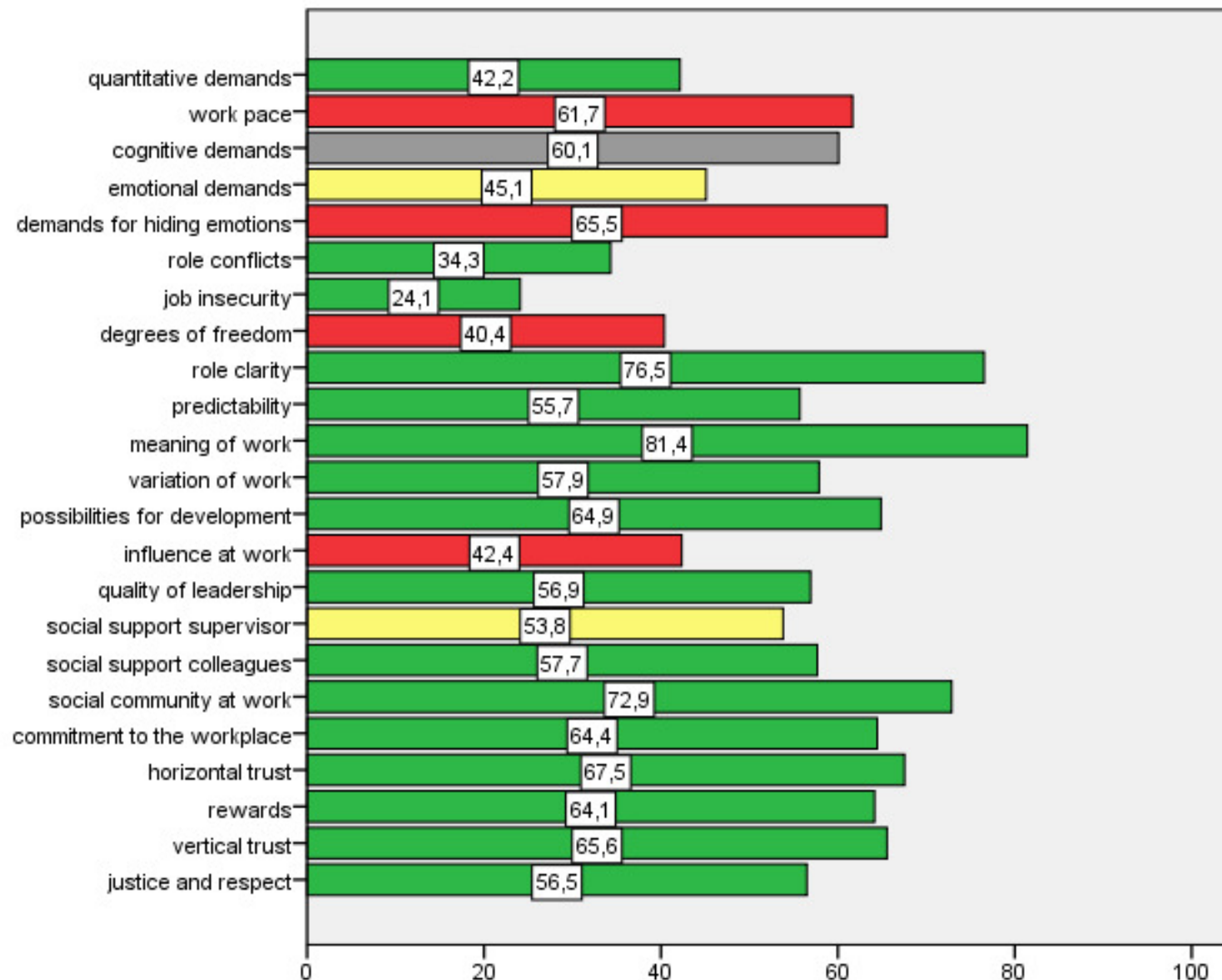
- degrees of freedom 40.3 (20.8)
- role clarity 76.3 (17.7)
- predictability 55.4 (23.5)
- meaning of work 81.3 (17.7)
- variation of work 57.7 (23.6)
- possibilities for development 64.7 (21.3)
- influence at work 42.3 (17.2)

Results LBC

COPSOQ Mean values (SD) (3)

- quality of leadership 56.7 (24.0)
- social support from supervisor 53.5 (21.4)
- social support from colleagues 57.6(18.3)
- social community at work 72.8 (18.3)
- commitment to the workplace 64.4 (17.9)
- horizontal trust 67.6 (19.2)
- rewards 63.8 (24.0)
- vertical trust 65.4 (18.9)
- justice and respect 56.2 (21.4)

Results LBC: COPSOQ - profile



Results LBC Multivariate logistic regression analysis

OR (95% CI) for the presence of LBC
in the past 12 months (n=1002)

- gender (F vs. M) 1.50 (1.12-1.99)
- physical work load 1.15 (1.08-1.22)
- possibilities for development 1.11 (1.04-1.18)
- quality of leadership 0.88 (0.83-0.93)

Conclusion

	NSC	LBC
gender (F vs. M)	2.23	1.50
physical work load		1.15
quantitative demands	1.12	
emotional demands	1.07	
possibilities for development		1.11
influence at work	0.92	
quality of leadership	0.91	0.88