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Organizational justice and disability pension from all-causes, depression and musculoskeletal diseases: A Finnish cohort study of public sector employees ¹

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¹ Appendix Tables A-C

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Additional table A. Sensitivity analysis with initially healthy participants: Association of long-term organizational justice with all-cause disability pensioning (among participants free from baseline mental disorders and baseline physical illnesses), disability pensioning due to depression (among participants free from mental disorders at baseline), and disability pensioning due to musculoskeletal diseases (among participants free from physical illnesses at baseline). HR=Hazard ratio for one-unit increase in the 5-point scale. 95% CI= 95% confidence interval.

Participants (N)	N of cases	Adjustment*			
		Model 1		Fully-adjusted	
		HR	95% CI	HR	95% CI
All-cause disability pensioning					
Free from baseline mental disorders	696	0.87	0.78-0.97	0.86	0.78-0.97

or physical

illnesses (17,810)

Disability pensioning due to depression

Free from baseline	157	0.68	0.54-0.86	0.71	0.56-
mental disorders					0.89
(23,156)					

**Disability pensioning due to
musculoskeletal diseases**

Free from baseline	371	0.89	0.76-1.03	0.86	0.74-
physical illnesses					1.01
(18,904)					

* **Model 1** adjusted for demographic factors: *age, sex and location of workplace.*

Fully-adjusted additionally adjusted for socioeconomic status (*occupational status, education and size of residence*), baseline health (*baseline physical illnesses for disability pensioning due to depression, and baseline mental disorders for disability pensioning due to musculoskeletal diseases*) and baseline health risk behaviors (*smoking, alcohol consumption, obesity and sedentary lifestyle*).

Additional table B. Association of one-unit increase in long-term organizational justice with disability pensioning controlling for long-term work stress.

Additionally* adjusted for						
Participants (n)	Job strain		ERI		Job strain and ERI	
	HR	95% CI	HR	95% CI	HR	95% CI
All-cause disability pension						
All (26,178)	0.96	0.89-1.04	0.96	0.91-1.03	0.98	0.92-1.05
Male (4,794)	0.88	0.73-1.06	0.91	0.78-1.07	0.90	0.76-1.06
Female (21,384)	0.98	0.90-1.07	0.97	0.91-1.04	1.00	0.93-1.08
Disability pension due to depression						
All (26,178)	0.89	0.74-1.07	0.89	0.77-1.03	0.95	0.80-1.12
Male (4,794)	0.54	0.32-0.92	0.59	0.39-0.90	0.68	0.41-1.11
Female (21,384)	0.95	0.78-1.15	0.94	0.80-1.10	0.99	0.83-1.17
Disability pension due to musculoskeletal diseases						
All (26,178)	0.97	0.87-1.08	0.98	0.90-1.07	0.97	0.88-1.07

Male (4,794)	0.94	0.72- 1.22	0.98	0.78- 1.22	0.92	0.72- 1.18
Female (21,384)	0.99	0.88- 1.11	0.99	0.90- 1.08	0.99	0.89- 1.10

* All associations were adjusted for age, sex (when appropriate), place of residence, socio-economic status (i.e. occupational status, education and income), baseline health and health risk behaviors and additionally for work-stress measure (T1 and T2 mean of job strain and ERI).

Additional table C. Association of work unit aggregated long-term organizational justice and its components with all-cause disability pensioning.

Participants (n)	Organizational justice		Relational justice		Procedural justice	
	HR*	95% CI	HR*	95% CI	HR*	95% CI
All (22 882)	0.94	0.80- 1.10	0.90	0.80- 1.02	1.02	0.88- 1.17
Male (4 164)	0.63	0.43- 0.94	0.74	0.54- 1.00	0.73	0.51- 1.05
Female (18 718)	1.00	0.84- 1.19	0.94	0.82- 1.07	1.07	0.92- 1.25

* Adjusted for age, sex (when appropriate) and place of residence.

APPENDIX 1.

According to Moorman, organizational justice consists of procedural justice and distributive justice components (29). Procedural justice was focused in the present study. We measured procedural justice using Moorman's Procedural Justice scale, which has two subcomponents, one for the fairness of the procedures used for the decision making in the organization (formal procedures), and the other for fairness of the interactions that enacted those procedures (interactional justice). The original Moorman's scale includes six statements on interactional justice and seven on formal procedures (see below). We use the terms 'relational justice' to refer to interactional justice, and 'procedural justice' to refer to formal procedures, as suggested by Elovainio et al (17). The statements used in present study are consistent with the original Moorman's scales.

Survey statements on relational justice:

- (1) Your supervisor considers your viewpoint.
- (2) Your supervisor is able to suppress personal biases.
- (3) Do you receive consistent information from line management (your supervisor)?
- (4) Your supervisor treats you with kindness and consideration.
- (5) Your supervisor shows concern for your rights.
- (6) Your supervisor takes steps to deal with you in a honest manner.

Survey statements on procedural justice:

- (1) Procedures are designed to collect the accurate information necessary for making decisions.
- (2) Procedures are designed to provide opportunities to appeal or challenge the decision.
- (3) Procedures are designed to hear the concerns of all those affected by the decision.
- (4) Procedures are designed to generate standards so that decisions can be made with consistency.
- (5) Procedures are designed to hear the concerns of all those affected by the decision.
- (6) Procedures are designed to provide useful feedback
- (7) Procedures are designed to provide clarification regarding the decision.