

Impact of psychosocial and mechanical work factors on medically certified sick leave due to musculoskeletal disorders

A nationwide prospective study of Norwegian home care employees

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Acknowledgements



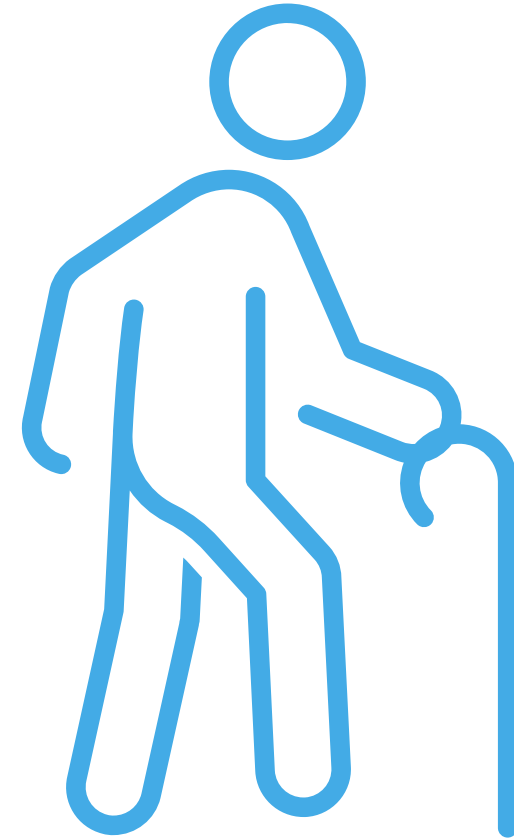
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National Institute for
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Norwegian Labour Inspectorate
Authority

Background

- Ageing population in need of home care
- High level of sick leave in home care sector (7.7% vs. 4.3% average) (1)
- Most frequent diagnoses are musculoskeletal disorders
- Work environment factors are associated with sick leave (2-3)
- Both psychosocial and mechanical risk factors are associated with musculoskeletal disorders (4-5)
- Identify occupation-specific risk factors



Methods

- All employees in municipalities with >20 and <100 home care employees were invited
- Data:
 - Questionnaire
 - Registry data on sick leave during a two-year follow-up period
- 1819 respondents
- Analysis: Negative binomial regression



Results – Sample characteristics



95.3% women



Mean age 45.5 years



48% - 13+ years of education



36% - full-time employed



75% - no management responsibilities



84% - minimum half working time with patients



42.5% experienced sick leave due to any cause



34% of sick leave due to musculoskeletal disorders

Results – Psychosocial factors

Mean and standard deviations for psychosocial work factors, and incidence risk ratio for sick leave due to musculoskeletal disorder

	Model 1					
	Descriptive		Unadjusted model		Adjusted model	
	Mean	SD	IRR	95% CI	IRR	95% CI
Quantitative demands	3.04	0.78	0.98	(0.83-1.15)	1.14	(0.95-1.38)
Decision demands	3.63	0.66	1.07	(0.87-1.33)*	1.24	(1.00-1.54)*
Learning demands	2.56	0.60	0.90	(0.73-1.12)	1.00	(0.80-1.26)
Role clarity	4.30	0.66	1.14	(0.91-1.43)	1.00	(0.79-1.27)
Role conflict	2.68	0.82	1.08	(0.92-1.26)	1.15	(0.97-1.35)
Decision control	2.80	0.71	0.89	(0.73-1.08)	0.88	(0.72-1.06)
Control over work pacing	2.33	0.86	0.83	(0.70-1.00)*	0.82	(0.68-0.99)*
Positive challenge at work	4.21	0.65	1.04	(0.85-1.27)	0.99	(0.80-1.22)
Emotional dissonance	2.36	0.94	1.05	(1.91-1.21)	1.07	(0.92-1.24)
Fair leadership	4.02	0.85	0.89	(0.76-1.04)	0.85	(0.73-1.00)
Empowering leadership	3.22	1.05	0.86	(0.76-0.98)*	0.87	(0.76-0.99)*
Support from immediate supervisor	3.80	1.02	0.90	(0.79-1.02)*	0.87	(0.77-1.00)*
Human resource primacy	2.98	0.98	0.95	(0.84-1.09)	0.94	(0.82-1.07)
Predictability next month	3.47	0.94	0.92	(0.80-1.06)	0.87	(0.75-1.01)

* P < 0.05

Results – Mechanical factors

Mean and standard deviations for mechanical work factors, and incidence risk ratio for sick leave due to musculoskeletal disorder

	Model 1					
	Descriptive		Unadjusted model		Adjusted model	
	Mean	SD	IRR	95% CI	IRR	95% CI
Squatting or kneeling	1.54	0.50	1.52	(1.16-2.00)**	1.39	(1.02-1.88)*
Walking or standing	1.92	0.28	1.87	(0.97-3.60)	1.62	(0.73-3.62)
Forward bending of the upper body	1.62	0.48	1.70	(1.26-2.28)**	1.49	(1.09-2.05)**
Awkward lifting	1.18	0.38	1.36	(0.98-1.87)	1.19	(0.85-1.67)
Lifting more than 10 kgs	1.19	0.39	1.26	(0.90-1.77)	1.18	(0.84-1.64)
Manually move patient in bed/chair	1.18	0.39	1.43	(1.02-2.00)	1.28	(0.89-1.83)
Lift/support patient between bed and chair/wheelchair	1.22	0.41	1.45	(1.06-1.98)*	1.41	(1.01-1.97)*
Heavy physical exertion without aids or assistance	1.09	0.29	1.44	(0.93-2.23)	1.22	(0.78-1.92)
Heavy physical exertion despite aids or assistance being available	1.05	0.22	1.50	(0.83-2.69)	1.27	(0.68-2.35)
Experiencing the work as physically demanding	1.53	0.50	2.03	(1.54-2.67)***	1.83	(1.36-2.47)***

* P < 0.05; ** P ≤ 0.01; *** P < 0.0001

Summary

Protective factors

- Control over work pacing
- Empowering leadership
- Support from immediate supervisor

Risk factors

- Decision demands
- Squatting or kneeling
- Forward bending
- Lift/support patient between bed and chair
- Experiencing the work as physically demanding



Resources

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Thank you for your attention

