

Appendix 1: Results of hierarchical regression analyses comparing changes in sick leave from the 6 months before the disaster event to afterward, between study-group rescue workers and uninvolved controls

Postdisaster period; sickness absence comparison measure* (95% confidence interval)								
Absence statistic Health cluster	Year 1				Years 2 and 3			
	Months 1-6		Months 7-12		Months 13-36		Stability of difference†	
Prevalence‡								
	Odds ratios							
Gastrointestinal	0.98	(0.43 to 2.24)	0.78	(0.36 to 1.70)	1.36	(0.58 to 3.18)	0.72	(0.59 to 0.89)§
Musculoskeletal	1.76	(1.17 to 2.62)§	1.66	(1.11 to 2.48)¶	1.55	(1.00 to 2.39)¶	1.06	(0.93 to 1.20)
Neurological	2.75	(0.67 to 11.28)	2.10	(0.53 to 8.37)	7.07	(1.39 to 35.97)¶	0.58	(0.38 to 0.88)¶
Psychological	1.73	(1.02 to 2.96)¶	2.02	(1.19 to 3.45)§	1.78	(0.98 to 3.23)	1.06	(0.89 to 1.25)
Respiratory	4.24	(3.00 to 6.00)**	3.66	(2.66 to 5.05)**	2.94	(2.00 to 4.30)**	1.00	(0.88 to 1.13)
Nonspecific ill health	2.31	(1.26 to 4.25)§	2.91	(1.58 to 5.34)**	1.74	(0.90 to 3.37)	1.31	(1.07 to 1.60)§
Incidence‡								
Gastrointestinal	1.23	(0.53 to 2.87)	0.94	(0.42 to 2.08)	1.50	(0.63 to 3.58)	0.74	(0.60 to 0.92)§
Musculoskeletal	2.09	(1.34 to 3.26)¶	1.74	(1.11 to 2.74)¶	1.80	(1.11 to 2.93)¶	1.00	(0.86 to 1.15)
Neurological	4.77	(0.87 to 26.11)	2.94	(0.59 to 14.69)	11.19	(1.62 to 77.14)¶	0.48	(0.29 to 0.79)§
Psychological	3.75	(1.79 to 7.83)**	2.82	(1.32 to 6.00)§	2.00	(0.85 to 4.69)	1.05	(0.83 to 1.31)
Respiratory	4.16	(2.93 to 5.91)**	3.71	(2.68 to 5.14)**	2.93	(1.99 to 4.32)**	1.01	(0.89 to 1.15)
Nonspecific ill health	2.70	(1.42 to 5.12)§	3.24	(1.70 to 6.18)**	1.71	(0.85 to 3.46)	1.37	(1.11 to 1.70)§
Frequency‡†								
	Risk ratios							
Gastrointestinal	0.96	(0.43 to 2.15)	0.84	(0.39 to 1.80)	1.24	(0.54 to 2.86)	0.75	(0.62 to 0.91)§
Musculoskeletal	1.82	(1.25 to 2.66)§	1.62	(1.11 to 2.36)¶	1.61	(1.08 to 2.42)¶	1.06	(0.94 to 1.19)
Neurological	2.87	(0.71 to 11.67)	2.07	(0.54 to 7.94)	6.95	(1.42 to 34.07)¶	0.58	(0.39 to 0.88)§
Psychological	1.79	(1.07 to 2.97)¶	1.93	(1.16 to 3.22)¶	1.71	(0.97 to 3.04)	1.05	(0.89 to 1.23)
Respiratory	3.48	(2.55 to 4.74)**	3.27	(2.47 to 4.34)**	2.62	(1.87 to 3.68)**	0.98	(0.88 to 1.10)
Nonspecific ill health	2.46	(1.36 to 4.45)§	3.01	(1.67 to 5.44)§	2.05	(1.09 to 3.87)¶	1.24	(1.03 to 1.50)¶
Sick days‡†								
	Estimated β coefficients							
Gastrointestinal	-0.03	(-0.47 to 0.40)	-0.02	(-0.45 to 0.42)	0.10	(-0.26 to 0.45)	-0.06	(-0.24 to 0.12)
Musculoskeletal	0.54	(-0.75 to 1.83)	0.70	(-0.60 to 2.00)	0.65	(-1.18 to 2.48)	0.34	(-0.18 to 0.87)
Neurological	0.04	(-0.43 to 0.50)	0.50	(0.03 to 0.96)¶	0.84	(0.23 to 1.44)§	-0.08	(-0.25 to 0.10)
Psychological	1.42	(-0.25 to 3.08)	3.28	(1.59 to 4.96)**	2.40	(0.34 to 4.47)¶	0.28	(-0.31 to 0.87)
Respiratory	1.19	(0.62 to 1.76)¶	1.13	(0.56 to 1.71)**	0.34	(-0.33 to 1.01)	0.29	(0.09 to 0.48)§
Nonspecific ill health	0.13	(-0.42 to 0.68)	0.23	(-0.32 to 0.78)	0.25	(-0.53 to 1.03)	0.05	(-0.17 to 0.27)
Duration‡†								
Gastrointestinal	10.68	(-12.69 to 34.05)	36.01	(13.65 to 58.36)§	28.91	(-2.77 to 60.59)	5.04	(-3.73 to 13.82)
Musculoskeletal	3.89	(-17.27 to 25.06)	3.21	(-18.22 to 24.65)	8.66	(-14.88 to 32.19)	-0.63	(-8.05 to 6.80)
Neurological	-58.63	(-144.71 to 27.45)	32.62	(-51.30 to 116.55)	132.09	(42.30 to 221.87)§	-20.48	(-44.65 to 3.69)
Psychological	72.54	(24.79 to 120.30)§	46.79	(-2.04 to 95.63)	52.86	(-2.04 to 107.75)	6.10	(-9.05 to 21.24)
Respiratory	1.05	(-3.07 to 5.18)	0.43	(-3.36 to 4.22)	-7.11	(-12.95 to -1.26)¶	4.74	(2.52 to 6.97)**
Nonspecific ill health	12.22	(-3.86 to 28.29)	7.91	(-8.19 to 24.01)	-6.69	(-26.15 to 12.78)	6.16	(-0.16 to 12.47)

*The coefficients in this table provide an index of the difference between the involved rescue workers and the control group in change of health-related sickness absences from pre- to postdisaster. Odds and rate ratios > 1 and estimated β coefficients > 0 indicate that the health of study workers deteriorated more than that of controls. All analyses were adjusted for sex, age, job experience and occupation.

†Measures whether the longer-term differences in sickness absence between study workers and controls were stable (ratios near 1), increasing (< 1) or decreasing (> 1) during postdisaster years 2 and 3.

‡Logistic regression.

§p < 0.01 between study workers and controls.

¶p < 0.05.

**p < 0.001.

††Poisson regression.

‡‡Linear regression.