Cumulative years of biomechanical and psychosocial work exposures and long-term sickness absence: A register-based cohort study among early-career Norwegian employees[1]

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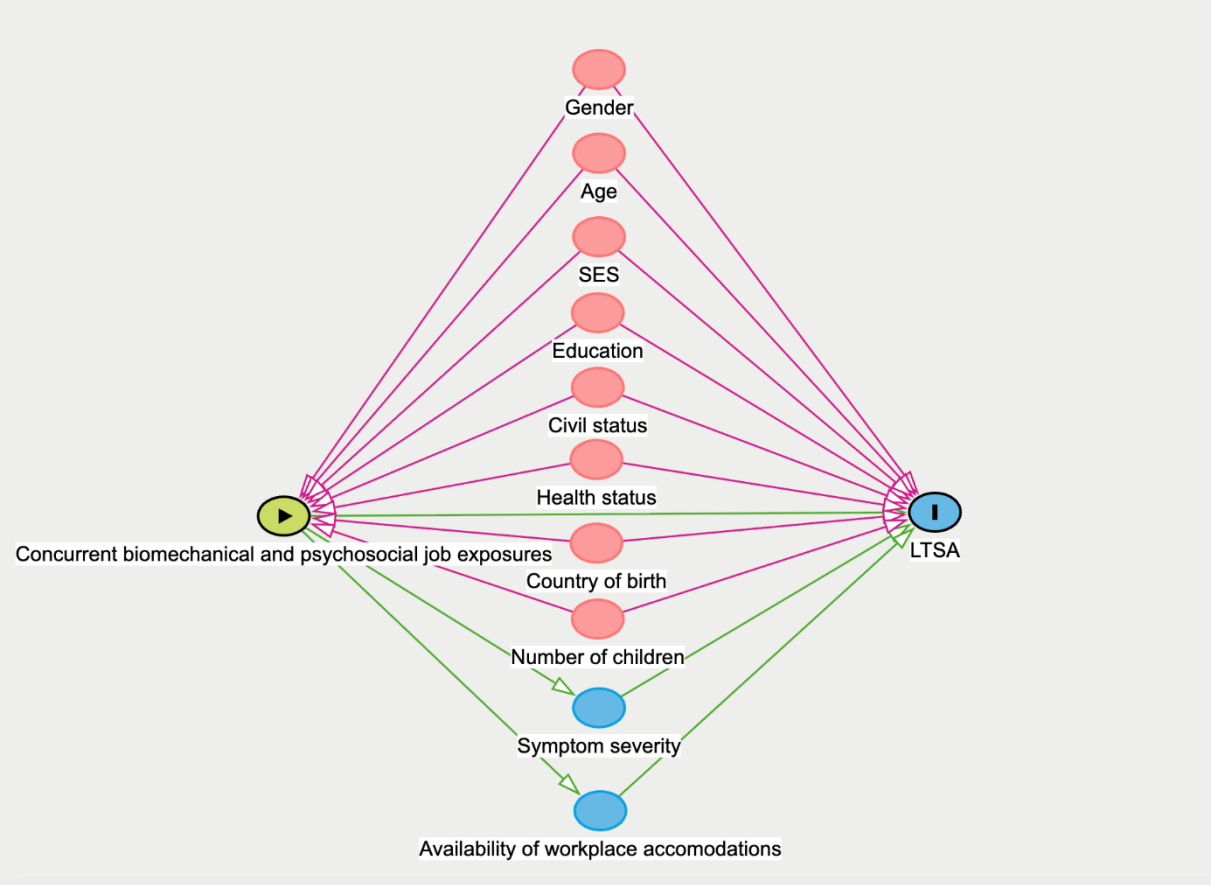


Figure S 1. DAG

Table S 1. Occupational groups, stratified by year and gender.

Occupational group/ Year	2011 N (%)		2012 N (%)		2013 N (%)		2014 N (%)		2015 N (%)	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	3 800 (57)	2 850 (43)	4 690 (59)	3 319 (41)	5 761 (59)	3 940 (41)	6 864 (61)	4 474 (39)	9484 (63)	5 691 (37)
2	13 105 (55)	10 701 (45)	15 464 (55)	12 796 (45)	17 523 (55)	14 496 (45)	19 071 (54)	16 266 (46)	24 150 (51)	22 859 (49)
3	23 064 (43)	31 018 (57)	25 439 (44)	32 604 (56)	27 665 (44)	34 546 (56)	29 014 (45)	35 804 (55)	33 477 (46)	40 061 (54)
4	5 566 (50)	5 502 (50)	5 960 (52)	5 558 (48)	6 016 (52)	5 600 (48)	6 163 (51)	5 845 (49)	6 760 (52)	6 187 (48)
5	13 609 (37)	23 553 (63)	13 452 (37)	23 153 (63)	13 316 (37)	22 860 (63)	13 436 (37)	22 913 (63)	14 119 (38)	23 218 (62)
6	853 (81)	195 (19)	861 (82)	189 (18)	881 (82)	190 (18)	907 (83)	184 (17)	1 016 (83)	213 (17)
7	23 396 (97)	843 (3)	24 253 (97)	864 (3)	24 840 (97)	879 (3)	25 575 (97)	888 (3)	26 050 (97)	945 (4)
8	11 449 (89)	1 409 (11)	12 208 (89)	1 516 (11)	12 960 (89)	1 584 (11)	13 661 (89)	1 652 (11)	14 620 (90)	1 677 (10)
9	4 874 (64)	2 689 (36)	4 948 (63)	2 883 (37)	5 175 (64)	2 960 (36)	5 292 (63)	3 066 (37)	5 017 (62)	3 099 (38)
0	5 (71)	2 (29)	5 (71)	2 (29)	4 (57)	3 (43)	4 (67)	2 (33)	1 463 (90)	159 (10)

1: Legislators, senior officials and managers
2: Professionals
3: Technicians and associate professionals
4: Clerks
5: Service workers and shop and market sales workers
6: Agricultural, forestry and fishery workers
7: Craft and related trades workers
8: Plant and machine operators and assemblers
9: Elementary occupations
0: Armed forces and unspecified

Table S 2. Years of combined physical and psychosocial work exposures and incident LTSA, stratified by gender and LTSA grade. Sensitivity analyses with cut-off set at 0.5 index value on both indices. Hazard ratios (HR) and 95% confidence intervals (CI) from Cox regression analyses with incremental adjustment for potential confounders.

	Model 1	**Model 2**	**Model 3**
	HR (95% CI)	**HR (95% CI)**	**HR (95% CI)**
Women			
Full LTSA			
Years exposed			
1	1.51 (1.42 – 1.61)	1.34 (1.26 – 1.43)	1.33 (1.25 – 1.42)
2	1.67 (1.55 – 1.79)	1.46 (1.36 – 1.58)	1.46 (1.35 – 1.57)
3	1.77 (1.64 – 1.91)	1.50 (1.39 – 1.62)	1.51 (1.39 – 1.63)
4	1.83 (1.70 – 1.96)	1.50 (1.39 – 1.61)	1.50 (1.39 – 1.61)
5	1.83 (1.75 – 1.92)	1.48 (1.40 – 1.55)	1.43 (1.36 – 1.51)
Partial LTSA			
Years exposed	**HR (95% CI)**	**HR (95% CI)**	**HR (95% CI)**
1	0.87 (0.81 – 0.94)	0.92 (0.85 – 0.99)	0.91 (0.84 – 0.98)
2	0.88 (0.80 – 0.97)	0.95 (0.86 – 1.04)	0.94 (0.85 – 1.03)
3	0.86 (0.77 – 0.95)	0.93 (0.84 – 1.03)	0.93 (0.84 – 1.03)
4	0.84 (0.76 – 0.92)	0.90 (0.82 – 0.99)	0.90 (0.82 – 0.99)
5	0.92 (0.86 – 0.97)	0.99 (0.93 – 1.05)	0.96 (0.90 – 1.02)
Men			
Full LTSA			
Years exposed	**HR (95% CI)**	**HR (95% CI)**	**HR (95% CI)**
1	1.56 (1.48 – 1.65)	1.21 (1.14 – 1.28)	1.20 (1.13 – 1.27)
2	1.73 (1.62 – 1.85)	1.31 (1.22 – 1.41)	1.28 (1.20 – 1.38)
3	1.64 (1.52 – 1.77)	1.24 (1.15 – 1.34)	1.23 (1.14 – 1.33)
4	1.45 (1.34 – 1.56)	1.08 (1.00 – 1.16)	1.07 (0.99 – 1.16)
5	1.63 (1.54 – 1.72)	1.19 (1.13 – 1.26)	1.18 (1.11 – 1.24)
Partial LTSA			
Years exposed	**HR (95% CI)**	**HR (95% CI)**	**HR (95% CI)**
1	1.09 (0.99 – 1.20)	1.02 (0.92 – 1.12)	1.01 (0.91 – 1.11)
2	1.14 (1.00 – 1.29)	1.05 (0.92 – 1.19)	1.02 (0.90 – 1.16)
3	0.92 (0.79 – 1.08)	0.86 (0.73 – 1.00)	0.85 (0.73 – 0.99)
4	1.29 (1.15 – 1.46)	1.16 (1.03 – 1.31)	1.15 (1.02 – 1.30)
5	1.45 (1.33 – 1.58)	1.26 (1.16 – 1.38)	1.24 (1.13 – 1.35)

Table S 3. Years of physical and psychosocial work exposures in isolation and incident LTSA, stratified by gender and LTSA grade. Hazard ratios (HR) and 95% confidence intervals (CI) from Cox regression. Fully adjusted model.

	Full LTSA	**Partial LTSA**
Women		
Years of psychosocial exposure	**HR (95% CI)**	**HR (95% CI)**
1	1.15 (1.11 – 1.20)	0.92 (0.89 – 0.96)
2	1.18 (1.12 – 1.24)	0.98 (0.93 – 1.02)
3	1.19 (1.13 – 1.24)	0.95 (0.90 – 0.99)
4	1.17 (1.12 – 1.21)	0.90 (0.87 – 0.94)
5	1.20 (1.16 – 1.23)	0.90 (0.88 – 0.92)
Years of physical exposure	**HR (95% CI)**	**HR (95% CI)**
1	1.26 (1.20 – 1.32)	1.05 (1.00 – 1.10)
2	1.34 (1.27 – 1.41)	0.99 (0.94 – 1.04)
3	1.44 (1.37 – 1.52)	1.01 (0.95 – 1.06)
4	1.50 (1.43 – 1.56)	1.02 (0.98 – 1.07)
5	1.44 (1.40 – 1.49)	1.04 (1.00 – 1.07)
Men		
Years of psychosocial exposure	**HR (95% CI)**	**HR (95% CI)**
1	1.11 (1.07 – 1.16)	1.01 (0.95 – 1.07)
2	1.07 (1.01 – 1.12)	1.12 (0.97 – 1.12)
3	1.09 (1.04 – 1.15)	0.99 (0.91 – 1.08)
4	1.11 (1.06 – 1.16)	1.07 (0.99 – 1.15)
5	1.15 (1.11 – 1.19)	1.09 (1.04 – 1.17)
Years of physical exposure	**HR (95% CI)**	**HR (95% CI)**
1	1.28 (1.22 – 1.34)	1.04 (0.97 – 1.12)
2	1.34 (1.28 – 1.41)	1.06 (0.97 – 1.12)
3	1.39 (1.33 – 1.46)	1.07 (1.00 – 1.17)
4	1.36 (1.31 – 1.42)	1.12 (1.04 – 1.19)
5	1.34 (1.30 – 1.38)	1.12 (1.07 – 1.17)