Original article. Scand J Work Environ Health. 2017;43(1):5–14
doi:10.5271/sjweh.3587

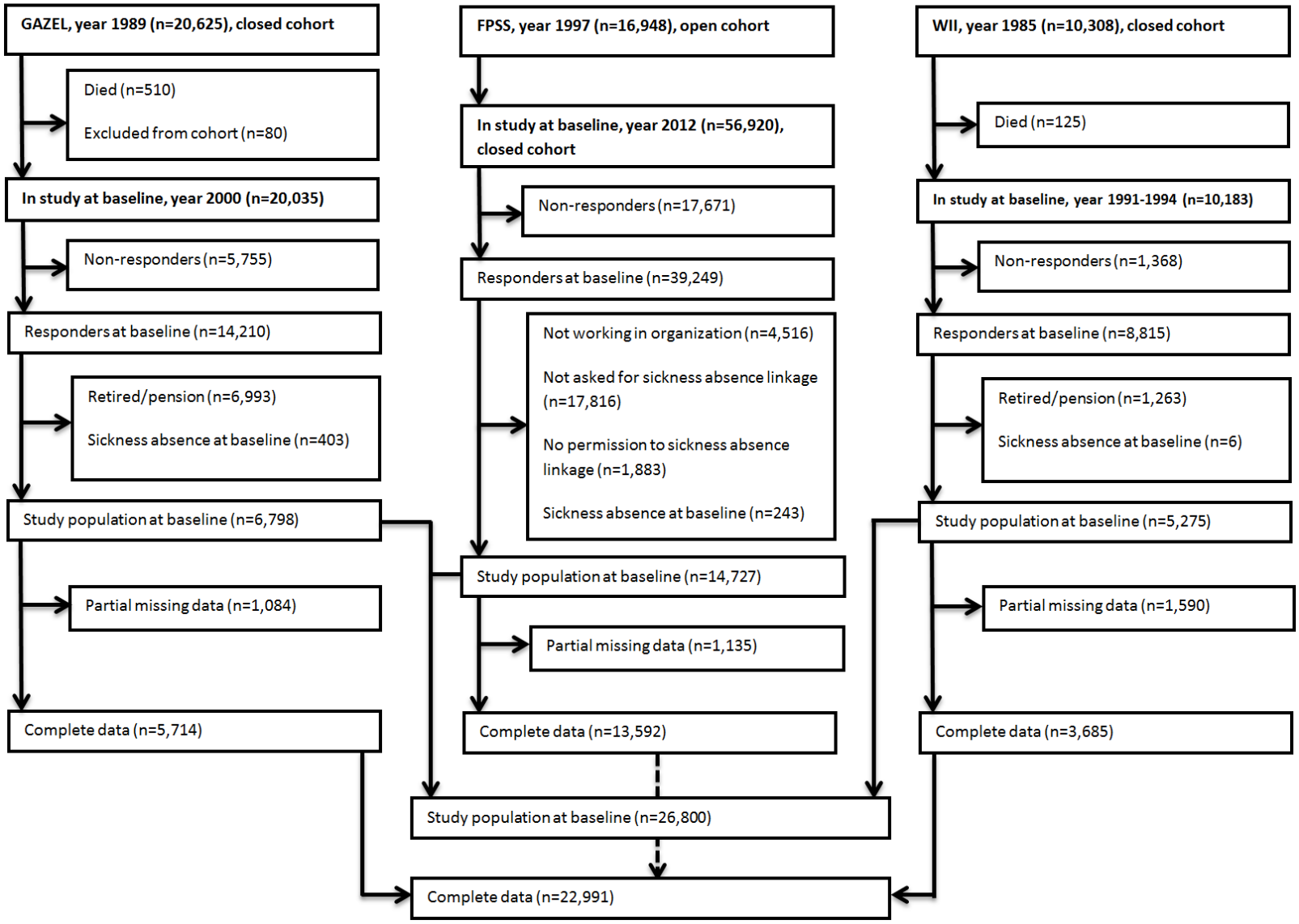
Job strain and informal caregiving as predictors of long-term sickness absence: A longitudinal multi-cohort study [1]

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1 *Appendix*

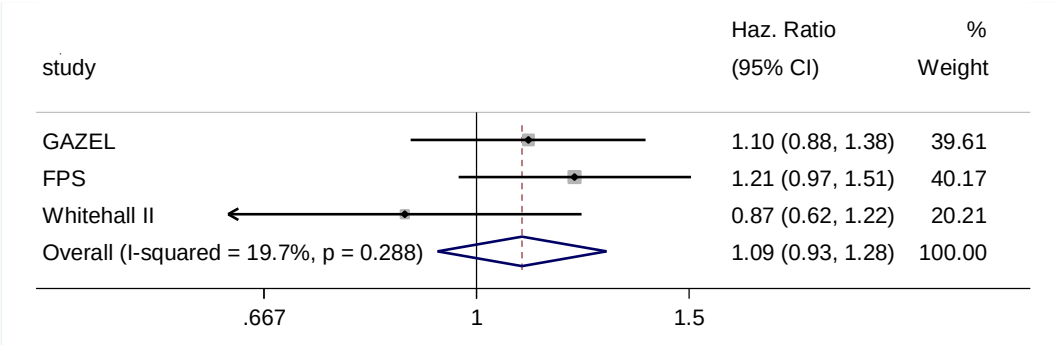
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Flowchart

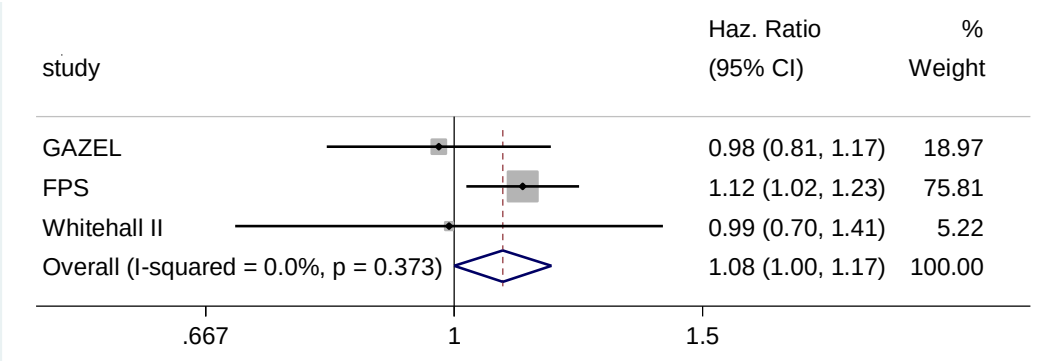

GAZEL, year 1989 (n=20,625), closed cohort
Died (n=510)
Excluded from cohort (n=80)
In study at baseline, year 2000 (n=20,035)
Non-responders (n=5,755)
Responders at baseline (n=14,210)
Retired/pension (n=6,993)
Sickness absence at baseline (n=403)
Study population at baseline (n=6,798)
Partial missing data (n=1,084)
Complete data (n=5,714)
FPSS, year 1997 (n=16,948), open cohort
In study at baseline, year 2012 (n=56,920), closed cohort
Non-responders (n=17,671)
Responders at baseline (n=39,249)
Not working in organization (n=4,516)
Not asked for sickness absence linkage (n=17,816)
No permission to sickness absence linkage (n=1,883)
Sickness absence at baseline (n=243)
Study population at baseline (n=14,727)
Partial missing data (n=1,135)
Complete data (n=13,592)
WII, year 1985 (n=10,308), closed cohort
Died (n=125)
In study at baseline, year 1991-1994 (n=10,183)
Non-responders (n=1,368)
Responders at baseline (n=8,815)
Retired/pension (n=1,263)
Sickness absence at baseline (n=6)
Study population at baseline (n=5,275)
Partial missing data (n=1,590)
Complete data (n=3,685)
Study population at baseline (n=26,800)
Complete data (n=22,991)

Appendix: Figure 2. Association between job strain and long-term sickness absence

A. Men



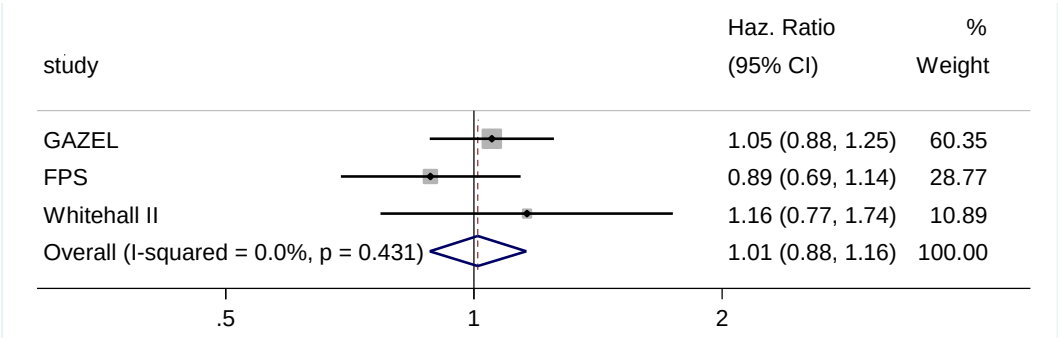
B. Women



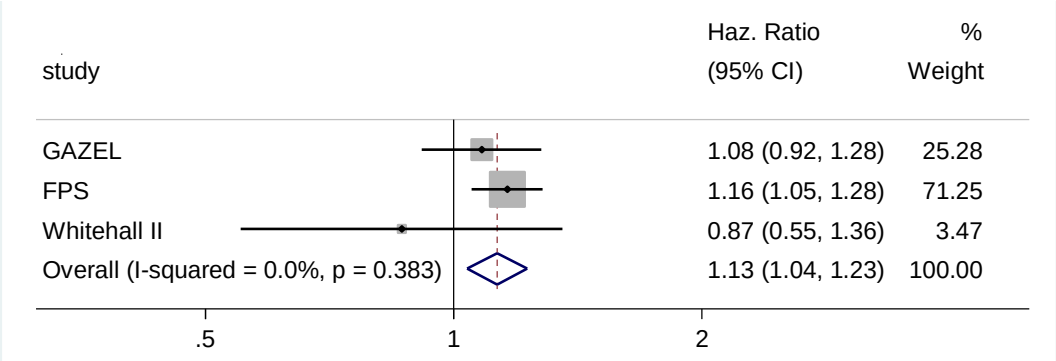
Adjusted for age, married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence, and longstanding illness

Appendix: Figure 3. Association between informal caregiving and long-term sickness absence

A. Men



B. Women



Adjusted for age, married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence, and longstanding illness

Appendix: Table 3. Joint exposure of informal caregiving and job strain on long-term sickness absence (Unadjusted and multiple adjusted). **Multiple adjusted: Adjusted for age, married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence, and longstanding illness**

	Unadjusted analyses			
	Men (n=9,568)	I^2	Women (n=12,995)	I^2
High strain, caregiving	1.02 (0.73;1.42)	0%	1.42 (1.22;1.65)	0%
High strain, no caregiving	1.30 (1.01;1.67)	61%	1.15 (0.96;1.39)	58%
No high strain, caregiving	1.11 (0.95;1.29)	0%	1.16 (1.02;1.36)	33%
No high strain , no caregiving	1	-	1	-
Multiplicative interaction	0.084	16%	0.934	0%
Additive interaction, SI	0.05	-	1.35	-
	Multiple adjusted analyses			
	Men (n=9,568)	I^2	Women (n=12,995)	I^2
High strain, caregiving	0.91 (0.64;1.28)	0%	1.20 (1.03;1.41)	0%
High strain, no caregiving	1.14 (0.97;1.35)	14%	1.06 (0.93;1.21)	27%
No high strain, caregiving	1.07 (0.92;1.24)	0%	1.15 (1.01;1.29)	14%
No high strain , no caregiving	1	-	1	-
Multiplicative interaction	0.112	0%	0.766	0%
Additive interaction, SI	-0.43	-	0.95	-

Appendix: Table 4. Joint exposure of informal caregiving and job strain on long-term sickness absence: Main analyses, multiple imputed, first event of long-term sickness absence, and censoring at age 58 respectively. Adjusted for age, married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence, and longstanding illness

	Multiple imputation analyses				**First event of long-term sickness absence only**				**Censor at age 58**			
	Men (n=11,331)	I^2	Women (n=15,469)	I^2	Men (n=9,568)	I^2	Women (n=12,995)	I^2	Men (n=8,832)	I^2	Women (n=10,962)	I^2
High strain, caregiving	0.92 (0.66;1.29)	0%	1.24 (1.07;1.44)	0%	0.86 (0.59;1.24)	0%	1.25 (1.05;1.49)	0%	0.89 (0.63;1.26)	0%	1.20 (1.02;1.42)	0%
High strain, no caregiving	1.17 (1.01;1.35)	0%	1.09 (0.97;1.22)	23%	1.14 (0.91;1.42)	37%	1.07 (0.96;1.18)	0%	1.15 (0.98;1.35)	4%	1.01 (0.86;1.19)	44%
No high strain, caregiving	1.05 (0.91;1.22)	0%	1.16 (1.04;1.31)	13%	1.01 (0.85;1.20)	0%	1.12 (0.94; 1.32)	31%	1.05 (0.90;1.23)	0%	1.17 (1.01;1.34)	21%
No high strain , no caregiving	1	-	1	-	1	-	1	-	1	-	1	-
Multiplicative interaction	0.179	0%	0.968	0%	0.146	0%	0.802	6%	0.112	0%	0.755	0%
Additive interaction, SI	-0.36	-	0.96	-	-0.93	-	1.32	-	-0.55	-	1.11	-

Appendix: Table 5. Joint exposure of informal caregiving and job strain on long-term sickness absence: Cohort-specific analyses and analyses without previous long-term sickness absence as a confounder. Adjusted for age, married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence (only cohort-specific analyses), and longstanding illness

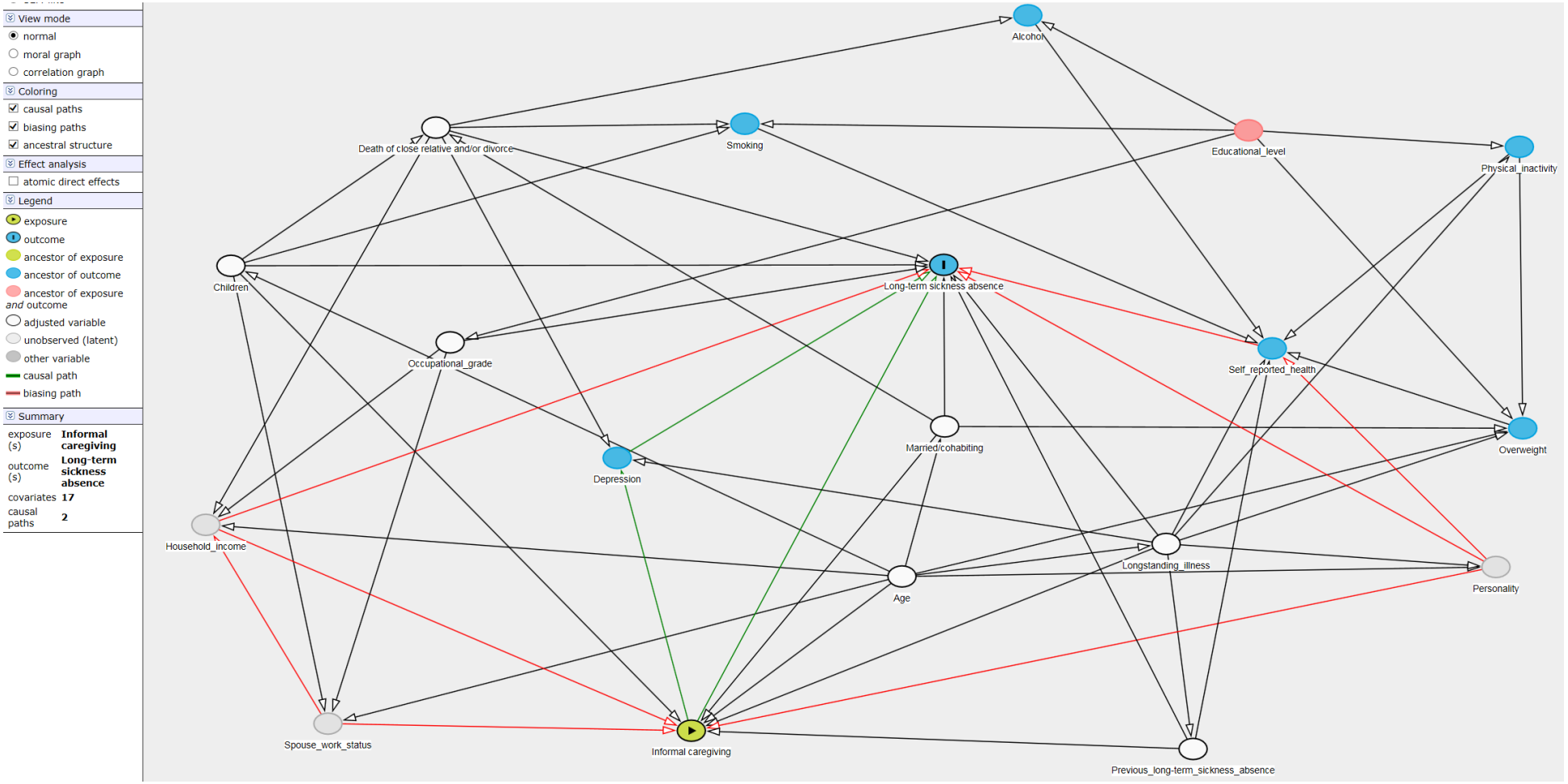
	GAZEL				**FPS**				**Whitehall II**				**Analysis without previous sickness absence as confounder**			
	Men (n=4,104)	Weight	Women (n=1,896)	Weight	Men (n=2,709)	Weight	Women (n=10,169)	Weight	Men (n=2,755)	Weight	Women (n=930)	Weight	Men (n=10,167)	I^2	Women (n=15,243)	I^2
High strain, caregiving	1.02 (0.67;1.56)	66%	1.12 (0.83;1.51)	28%	0.71 (0.36;1.40)	25%	1.24 (1.03;1.51)	68%	0.73 (0.23;2.29)	9%	1.17 (0.49;2.81)	3%	0.91 (0.64;1.28)	0%	1.33 (1.15-1.55)	0%
High strain, no caregiving	1.16 (0.90;1.51)	36%	0.95 (0.77;1.26)	26%	1.26 (1.00;1.59)	43%	1.14 (1.03;1.26)	63%	0.91 (0.65;1.29)	21%	0.94 (0.65;1.36)	11%	1.17 (0.95;1.44)	45 %	1.14 (1.04-1.24)	0%
No high strain , caregiving	1.08 (0.88;1.32)	57%	1.12 (0.90;1.40)	26%	0.97 (0.74;1.28)	30%	1.19 (1.06;1.34)	69%	1.27 (0.82;1.95)	12%	0.80 (0.48;1.33)	5%	1.06 (0.91;1.24)	0%	1.13(0.97-1.33)	37 %
No high strain , no caregiving	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-
Multiplicative interaction	0.434	64%	0.825	26%	0.160	26%	0.502	70%	0.505	10%	0.415	4%	P=0.104	0%	P=0.861	0%
Additive interaction, SI	0.08	-	1.71	-	-1.26	-	0.73	-	-1.50	-	-0.65	-	-0.39	-	1.22	-

Appendix: Table 6. Joint exposure of informal caregiving and job demands/job control on long-term sickness absence. Adjusted for age,

	Meta-analyses separate for demands and control			
Job demands	Men (n=9,661)	I^2	Women (n=13,235)	I^2
High demands, caregiving	0.90 (0.73;1.12)	0%	1.19 (1.05;1.34)	0%
High demands, no caregiving	0.97 (0.81;1.18)	60%	1.05 (0.92;1.20)	39%
Low demands, caregiving	1.09 (0.91;1.31)	0%	1.16 (1.04;1.31)	0%
Low demands, no caregiving	1	-	1	-
Multiplicative interaction	p=0.178	0%	p=0.612	0%
Additive interaction, SI	-1.67	-	0.90	-
Job control	Men (n=9,628)	I^2	Women (n=13,127)	I^2
Low control, caregiving	1.02 (0.82;1.28)	0%	1.28 (1.13;1.44)	0%
Low control, no caregiving	1.22 (1.08;1.38)	0%	1.10 (0.92;1.31)	60%
High control, caregiving	1.18 (0.98;1.41)	0%	1.10 (0.83;1.45)	62%
High control, no caregiving	1	-	1	-
Multiplicative interaction	P=0.023	0%	P=0.837	41%
Additive interaction, SI	0.05	-	1.40	-

married/cohabiting, children, occupational grade, death of relative and/or divorce, previous long-term sickness absence, and longstanding illness

Directed Acyclic Graph (DAG): Informal caregiving and long-term sickness absence



Directed Acyclic Graph (DAG): Job strain and long-term sickness absence

