SUPPLEMENTARY MATERIAL CAPTIONS

Table S1. Distribution of education (%) in the original and matched sample by gender, occupational class and calendar year.

	(Original sample			Matched sample		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary	
Men							
Upper-level non-manual employees							
2007	4.4	14.3	81.3	4.4	15.5	80.1	
2010	4.1	14.9	81.0	4.2	14.8	81.0	
2013	3.5	13.3	83.2	3.8	13.8	82.4	
Lower-level non-manual employees							
2007	13.8	39.2	47.0	14.9	47.2	37.9	
2010	12.1	41.6	46.3	12.5	42.8	44.7	
2013	10.1	41.2	48.7	11.9	42.2	45.9	
Skilled manual workers							
2007	26.0	68.9	5.1	22.9	72.5	4.6	
2010	22.7	71.6	5.7	22.8	71.8	5.4	
2013	20.6	73.7	5.7	23.1	71.6	5.3	
Unskilled manual workers							
2007	35.7	56.5	7.8	30.9	60.8	8.3	
2010	31.6	59.6	8.8	32.1	59.4	8.5	
2013	29.2	61.9	8.9	32.2	59.7	8.1	
Self-employed farmers and agricultural we	orkers						
2007	30.1	58.1	11.8	28.9	62.3	8.8	
2010	25.3	61.3	13.4	25.9	61.1	13.0	
2013	23.0	61.5	15.5	25.2	61.1	13.7	
Other self-employed							
2007	25.6	46.8	27.6	23.6	50.3	26.1	
2010	22.8	48.8	28.4	23.4	49.3	27.3	
2013	20.3	50.4	29.3	22.9	49.6	27.5	
B) Women							
Upper-level non-manual employees							
2007	2.3	9.7	88.0	2.0	10.3	87.7	
2010	1.9	8.8	89.3	2.0	9.2	88.8	
2013	1.4	7.4	91.2	1.9	8.6	89.5	
Lower-level non-manual employees							
2007	12.2	44.1	43.7	10.4	48.2	41.4	
2010	9.5	44.6	45.9	9.2	46.0	44.8	
2013	7.2	44.4	48.4	9.0	46.2	44.8	
Skilled manual workers							
2007	32.3	56.6	11.1	25.2	62.6	12.2	
2010	26.8	60.1	13.1	25.3	62.4	12.3	
2013	23.2	62.3	14.5	26.8	60.4	12.8	
Unskilled manual workers							

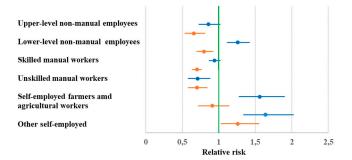
2007	33.3	60.7	6.0	25.4	66.2	8.4
2010	28.4	63.4	8.2	26.5	64.7	8.8
2013	24.6	66.3	9.1	28.1	63.7	8.2
Self-employed farmers and agricultu	ıral workers					
2007	20.2	59.0	20.8	17.5	63.3	19.4
2010	16.2	59.7	24.1	18.0	61.6	20.4
2013	12.7	60.2	27.1	16.0	61.9	22.1
Other self-employed						
2007	16.7	47.4	35.9	12.5	49.8	37.8
2010	13.3	47.7	39.0	13.3	47.7	39.0
2013	11.3	46.3	42.4	13.6	47.7	38.7

Table S2. Year-specific distribution (%) of the matched study population over the study period by background characteristics among (A) men and (B) women

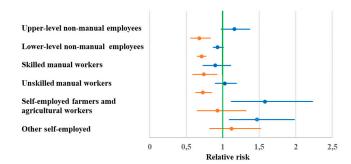
				Change (percentage points)		
	2007	2010	2013	2007-	2010- 2013	2007- 2013
				2010		
	N	N	N			
A) Men	456365	456365	456365			
Age						
30-34	15.6	16.4	16.7	0.8	0.3	1.1
35-39	16.5	15.1	16.5	-1.4	1.4	0.0
40-44	18.3	17.9	16.3	-0.4	-1.6	-2.0
45-49	17.7	18.4	18.0	0.7	-0.4	0.3
50-54	17.1	17.1	17.2	0.0	0.1	0.1
55-59	14.8	15.2	15.3	0.4	0.1	0.5
Occupational class						
Upper-level non-manual employees	27.4	23.9	22.2	-3.5	-1.7	-5.2
Lower-level non-manual employees	24.3	23.9	25.3	-0.4	1.4	1.0
Skilled manual workers	27.9	29.5	29.2	1.6	-0.3	1.3
Unskilled manual workers Self-employed farmers and agricultural	4.7	6.2	6.6	1.5	0.4	1.9
workers	5.9	5.2	4.6	-0.7	-0.6	-1.3
Other self-employed	9.7	11.3	12.2	1.6	0.9	2.5
Major region						
Southern Finland	30.6	30.1	31.4	-0.5	1.3	0.8
Western Finland & Åland	21.7	21.6	21.3	-0.1	-0.3	-0.4
Eastern Finland	25.0	25.4	25.0	0.4	-0.4	0.0
Northern Finland	22.7	22.9	22.3	0.2	-0.6	-0.4
Employment sector						
Private, domestic	67.1	66.9	67.3	-0.2	0.4	0.2
Private, foreign	10.2	9.7	9.2	-0.5	-0.5	-1.0
Public	22.7	23.4	23.5	0.7	0.1	0.8
Physically heavy work	30.7	31.7	30.1	1.0	-1.6	-0.6
Mean days in full work duties						
-2 year	292		286		281	
-1 year	288		288		279	
Mean days on full sickness absence						
-2 year	4.0		3.3		3.1	
-1 year	2.9		2.6		2.6	
Mean days in unemployment						
-2 year	6.2		8.7		6.5	
-1 year	9.7		8.1		10.3	
D) III	120112	420 4 42	120 1 12			
B) Women	429442	429442	429442			

30-34	Age						
40-44	30-34	13.7	14.7	15.1	1.0	0.4	1.4
18.5 19.1 18.5 0.6 0.0 0.0	35-39	15.6	14.4	15.2	-1.2	0.8	-0.4
So-54 18.3 18.6 18.2 0.3 -0.4 -0.1 S5-59 15.5 15.9 17.1 0.4 1.2 1.6 Coccupational class Upper-level non-manual employees 26.5 22.4 21.8 -4.1 -0.6 -4.7 Lower-level non-manual employees 54.6 56.8 57.3 2.2 0.5 2.7 Skilled manual workers 4.7 4.9 5.0 0.2 0.1 0.3 Unskilled manual workers 7.4 8.4 7.8 1.0 -0.6 0.4 Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Aland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland & 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 296 3.3 3.6 3.3 Mean days in unemployment -2 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	40-44	18.3	17.3	15.8	-1.0	-1.5	-2.5
Deccupational class	45-49	18.5	19.1	18.5	0.6	-0.6	0.0
Occupational class Upper-level non-manual employees 26.5 22.4 21.8 -4.1 -0.6 -4.7 Lower-level non-manual employees 54.6 56.8 57.3 2.2 0.5 2.7 Skilled manual workers 4.7 4.9 5.0 0.2 0.1 0.3 Unskilled manual workers 7.4 8.4 7.8 1.0 -0.6 0.4 Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2	50-54	18.3	18.6	18.2	0.3	-0.4	-0.1
Upper-level non-manual employees 26.5 22.4 21.8 4.1 -0.6 -4.7 Lower-level non-manual employees 54.6 56.8 57.3 2.2 0.5 2.7 Skilled manual workers 4.7 4.9 5.0 0.2 0.1 0.3 Unskilled manual workers 7.4 8.4 7.8 1.0 -0.6 0.4 Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, foreign 10.0 9.2 8.6	55-59	15.5	15.9	17.1	0.4	1.2	1.6
Lower-level non-manual employees S4.6 S6.8 S7.3 2.2 0.5 2.7	Occupational class						
Skilled manual workers 4.7 4.9 5.0 0.2 0.1 0.3 Unskilled manual workers Self-employed farmers and agricultural workers 7.4 8.4 7.8 1.0 -0.6 0.4 Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.	Upper-level non-manual employees	26.5	22.4	21.8	-4.1	-0.6	-4.7
Unskilled manual workers Self-employed farmers and agricultural workers 7.4 8.4 7.8 1.0 -0.6 0.4 Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0	Lower-level non-manual employees	54.6	56.8	57.3	2.2	0.5	2.7
Self-employed farmers and agricultural workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties 29.2 29.2<	Skilled manual workers	4.7	4.9	5.0	0.2	0.1	0.3
workers 1.5 1.5 2.0 0.0 0.5 0.5 Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Aland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 29.6 291 284 29 -1.2 1.0 Mean days on full sickness absence		7.4	8.4	7.8	1.0	-0.6	0.4
Other self-employed 5.4 5.9 6.1 0.5 0.2 0.7 Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties 296 291 284 29 -1.2 1.0 Mean days on full sickness absence 29 (20.0) 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8		1.5	1.5	2.0	0.0	0.5	0.5
Major region Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0							
Southern Finland 32.9 32.2 32.2 -0.7 0.0 -0.7 Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties 296 291 284 28 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0		J. 4	3.9	0.1	0.5	0.2	0.7
Western Finland & Åland 21.6 22.3 21.9 0.7 -0.4 0.3 Eastern Finland 23.6 23.4 24.1 -0.2 0.7 0.5 Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 29 -1.2 1.0 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 -1.4 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
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Northern Finland 21.8 22.0 21.9 0.2 -0.1 0.1 Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0 9.0 -0.1 -0.6 -1.4 -0.6 -1.4 0.8 -0.6 -1.4 0.8 -0.6 -1.4 0.8 -0.6 -1.2 1.0 -1.2 1.0 -1.2 1.0 -1.2 1.0 -1.2 -1.2 1.0 -1.2 -1.2 -1.2 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Employment sector Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	Eastern Finland						
Private, domestic 44.6 45.0 45.2 0.4 0.2 0.6 Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment 10.9 10.3 9.0	Northern Finland	21.8	22.0	21.9	0.2	-0.1	0.1
Private, foreign 10.0 9.2 8.6 -0.8 -0.6 -1.4 Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties 296 291 284 288 279 Mean days on full sickness absence 296 288 288 279 Mean days on full sickness absence 3.8 3.8 3.3 -1 year 4.3 3.6 3.3 Mean days in unemployment 3.2 3.2 -2 year 10.9 10.3 9.0	Employment sector						
Public 45.4 45.8 46.2 0.4 0.4 0.8 Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	Private, domestic	44.6	45.0	45.2	0.4	0.2	0.6
Physically heavy work 21.5 23.7 22.5 2.2 -1.2 1.0 Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	Private, foreign	10.0	9.2	8.6	-0.8	-0.6	-1.4
Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	Public	45.4	45.8	46.2	0.4	0.4	0.8
Mean days in full work duties -2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	Physically heavy work	21.5	23.7	22.5	2.2	-1.2	1.0
-2 year 296 291 284 -1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0			2017			1.2	1.0
-1 year 288 288 279 Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	•	296	291	284			
Mean days on full sickness absence -2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	•						
-2 year 5.5 4.2 3.8 -1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0	•			_,,			
-1 year 4.3 3.6 3.3 Mean days in unemployment -2 year 10.9 10.3 9.0		5.5	4.2	3.8			
Mean days in unemployment -2 year 10.9 10.3 9.0	•	4.3	3.6	3.3			
-2 year 10.9 10.3 9.0	-						
•		10.9	10.3	9.0			
-1 year 10./ 13.5 13.4	-1 year	16.7	13.5	13.4			

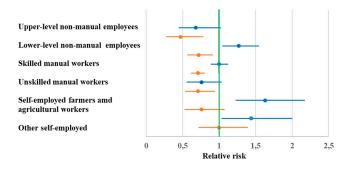
A) All-cause disability retirement. Men.



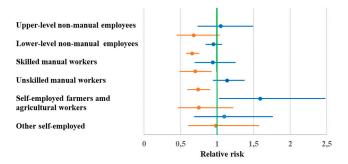
B) All-cause disability retirement. Women.



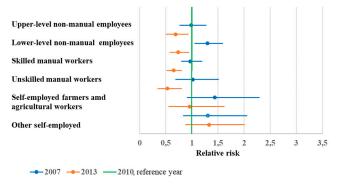
C) Disability retirement due to MSD. Men. Women.



D) Disability retirement due to MSD.



E) Disability retirement due to mental disorders. Men. disorders. Women.



F) Disability retirement due to mental

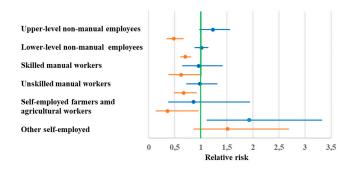


Figure S1. Age adjusted hazard ratios (HR) and their 95% confidence intervals (95% CI) for all-cause and cause-specific disability retirement by observational year and occupational class among 30–59 years old men and women. Reference group: year 2010 (HR=1.00). (A–B) all-cause disability retirement, (C–D) disability retirement due to musculoskeletal diseases (MSD), and (E–F) disability retirement due to mental disorders. Location of the blue line on the right side from the reference line (green line) indicates the risk of disability retirement in year 2007 was lower than in 2010. Location of the orange line on the left side from the reference line (green line) indicates the risk of disability retirement in year 2013 was lower than in 2010.