

Supplementary materials

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Supplementary Table 1: Results of event study fixed effect (FE) models for all outcomes.

Follow-up year	Mental Health Conditions			Back disorders	Long-term sick leave	
	(1)	(2)	(3)	(4)	(5)	(6)
	Minor	Moderate	Severe		> 4 weeks	> 6 weeks
1	-0.00726** (0.0482)	-0.00109 (0.530)	0.000436 (0.344)	0.00153 (0.362)	0.0101*** (0.000659)	0.00793*** (0.00296)
2	-0.00547 (0.238)	-0.00177 (0.363)	-0.000941 (0.149)	0.00398** (0.0192)	0.0280*** (1.12e-10)	0.0235*** (7.65e-09)
3	-0.00604 (0.224)	-0.00162 (0.407)	-0.000712 (0.304)	0.00627*** (0.000767)	0.0251*** (1.47e-08)	0.0218*** (1.53e-07)
4	-0.0130*** (0.00878)	-0.00388 (0.101)	-2.45e-05 (0.973)	0.00398** (0.0474)	0.0184*** (4.09e-05)	0.0177*** (2.83e-05)
5	-0.0108** (0.0379)	-0.00520** (0.0298)	-0.00186*** (0.00437)	0.00169 (0.320)	0.00799* (0.0887)	0.00677 (0.129)
6	-0.00491 (0.354)	-0.00508** (0.0357)	-0.000944 (0.274)	-0.000392 (0.840)	0.00667 (0.183)	0.00338 (0.476)
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	60,997	60,997	60,997	60,997	60,997	60,997
R-squared	0.015	0.003	0.001	0.002	0.014	0.013
N individuals	8,752	8,752	8,752	8,752	8,752	8,752

Coefficients are estimated using a fixed effects (within) estimator with standard errors clustered at the individual level. P-values are based on two-sided t-tests. No adjustments were made for multiple comparisons.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Supplementary Table 2: Baseline^a characteristics of hospital-employed individuals and matched controls from the education and social care sectors, before and after matching

Variable	Before Matching			After Matching		
	Education and social care <i>n</i> = 42,873	Hospital <i>n</i> = 6,221	P-value	Control group <i>N</i> = 3,203	Hospital group <i>N</i> = 3,203	P-value
Matching Variables						
Age, mean (SD)	23.29 (2.11)	23.60 (1.91)	<0.001	23.32 (1.55)	23.32 (1.55)	1.00
Female, <i>n</i> (%)	23,329 (54.4%)	6,000 (96.4%)	<0.001	3,075 (96.0%)	3,075 (96.0%)	1.00
Married, <i>n</i> (%)	1,811 (4.2%)	373 (6.0%)	<0.001	26 (0.8%)	26 (0.8%)	1.00
Non-Danish ethnicity, <i>n</i> (%)	4,170 (9.7%)	364 (5.9%)	<0.001	76 (2.4%)	76 (2.4%)	1.00
No. of children, mean (SD)	0.08 (0.33)	0.15 (0.46)	<0.001	0.02 (0.17)	0.02 (0.17)	1.00
General practitioner costs ^b , mean (SD)	72.82 (77.89)	109.29 (84.60)	<0.001	105.07 (82.32)	108.77 (82.48)	0.072
Other Variables						
Disposable income ^b , mean (SD)	15,630.50 (11,961.15)	18,135.76 (7988.58)	<0.001	15,401.21 (8,026.16)	17,290.70 (7,625.86)	<0.001
Pharmaceutical costs ^c , mean (SD)	64.74 (333.59)	97.00 (179.03)	<0.001	112.03 (911.90)	98.87 (164.71)	0.42
Other primary care costs ^c , mean (SD)	98.63 (179.60)	135.09 (224.43)	<0.001	129.05 (226.22)	141.34 (220.99)	0.028
Hospital costs ^{c, d} , mean (SD)	475.76 (2,181.27)	652.47 (2,079.79)	<0.001	622.42 (2,303.96)	620.15 (2,128.52)	0.97
Nurses, <i>n</i> (%)		5,795 (93.2%)		2,961 (92.4%)		
Midwives, <i>n</i> (%)		426 (6.8%)		242 (7.6%)		

Note: Dummies for the 98 municipalities and employment years are not reported, but applied in exact matching.

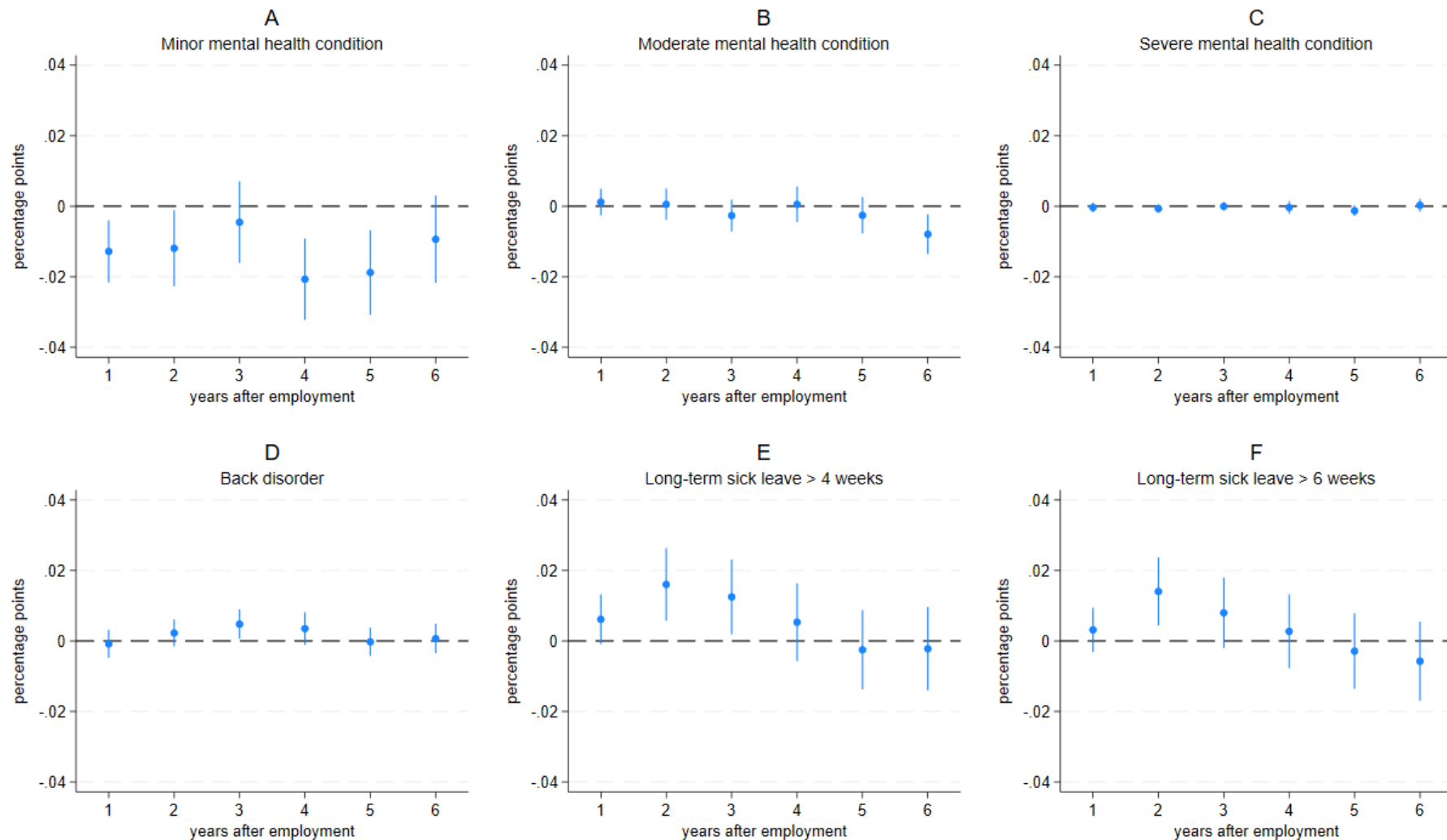
^aBaseline *t* = 0, represents the year before employment.

^bequivalent disposable income is adjusted for household size and composition to allow for a more accurate assessment of the individual's economic circumstances. Expressed in EUR.

^cAll costs are reported in EUR. Converted from Danish kroner (DKK) using the exchange rate of 7.45 DKK per EUR.

^dSum of DRG. The DRG system is employed in healthcare financing, including inter-regional settlements, proximity financing schemes, and municipal co-financing.

P-values are based on two-sided independent sample t-tests for continuous variables and two-sided Pearson's chi-squared tests for binary variables. No adjustment for multiple comparisons was applied.



Supplementary Figure 1: Robustness analysis: Event study fixed effect models for all outcomes using a homogeneous comparison group.

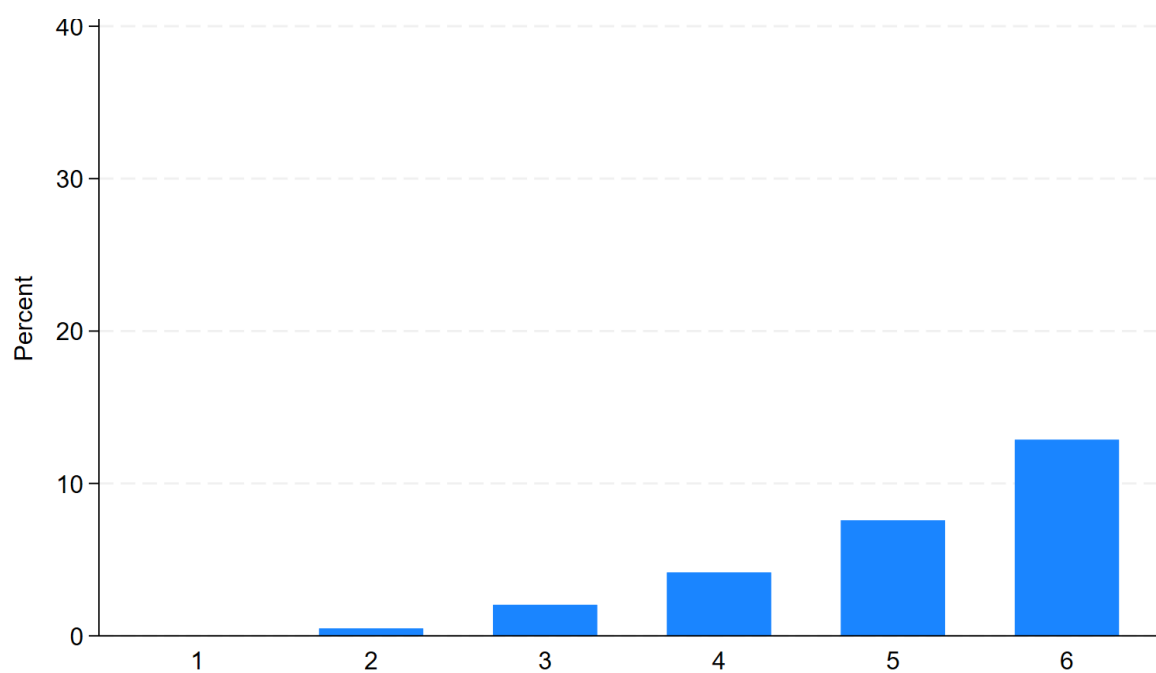
Note: Estimates reflect the annual difference in probability (percentage points) of each health outcome among hospital-employed nurses and midwives relative to a matched control group of workers in the education and social care industries, over six years following labour market entry. The study population is an inception cohort of individuals who graduated from an undergraduate programme and entered the labour market within 180 days of graduation. Each panel presents results for a distinct health outcome: Panel A: Minor mental health condition. Panel B: Moderate mental health condition. Panel C: Severe mental health condition. Panel D: Back disorder. Panel E: Long-term sick leave >4 weeks. Panel F: Long-term sick leave >6 weeks. Estimates are based on $n=6,406$ biologically independent individuals with 44,652 observations. Data are presented as mean estimates with error bars indicating 95% confidence intervals. Significance at $\alpha = 0.05$ is indicated based on two-sided t-tests with standard errors clustered at the individual level. The control group was matched on age, sex, ethnicity, marital status, number of children, municipality of residence, year of labour market entry, and baseline GP-related healthcare costs. All observations are derived from Danish nationwide administrative registers.

Supplementary Table 3: Robustness analysis: Results of event study fixed effect (FE) models for all outcomes. Hospital-employed individuals and matched controls from the education and social care sectors

Follow-up year	Mental Health Conditions			Back disorders	Long-term sick leave	
	(1)	(2)	(3)	(4)	(5)	(6)
	Minor	Moderate	Severe		> 4 weeks	> 6 weeks
1	-0.0128*** (0.00451)	0.00119 (0.537)	-0.000338 (0.632)	-0.000823 (0.688)	0.00614* (0.0888)	0.00315 (0.325)
2	-0.0119** (0.0302)	0.000556 (0.808)	-0.000651 (0.301)	0.00226 (0.248)	0.0160*** (0.00224)	0.0140*** (0.00423)
3	-0.00452 (0.444)	-0.00263 (0.257)	-2.49e-05 (0.968)	0.00477** (0.0252)	0.0125** (0.0213)	0.00799 (0.117)
4	-0.0207*** (0.000437)	0.000552 (0.831)	-0.000338 (0.719)	0.00351 (0.135)	0.00533 (0.343)	0.00271 (0.611)
5	-0.0188*** (0.00218)	-0.00257 (0.329)	-0.00128* (0.0973)	-0.000242 (0.906)	-0.00251 (0.662)	-0.00289 (0.598)
6	-0.00936 (0.139)	-0.00793*** (0.00586)	0.000289 (0.759)	0.000690 (0.746)	-0.00219 (0.717)	-0.00575 (0.316)
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	44,652	44,652	44,652	44,652	44,652	44,652
N individuals	6,406	6,406	6,406	6,406	6,406	6,406

Coefficients are estimated using a fixed effects (within) estimator with standard errors clustered at the individual level. P-values are based on two-sided t-tests. No adjustments were made for multiple comparisons.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$



Supplementary Figure 2: Bar graph illustrating the accumulated percentage of nurses and midwives who left hospital employment over the 6-year follow-up period

Note: n=4,376 biologically independent individuals.