Supplementary Online Content


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eReferences.

This supplementary material has been provided by the authors to give readers additional information about their work.
**eFigure 1.** Detailed Flowchart for the Selection of the Included Studies

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- **Electronic databases**
  - Medline: n=8489 + 1336
  - Embase: n=9609 + 1792
  - Psycinfo: n=6446 + 2840
  - Web of science: n=11 473
  - CINAHL: n=6461
  - IS: n=3996
  - Sociological abstract: n=1400

- **Total**: n=53 842
  - Duplicate: n=27 441
  - <1979: n=409

- **Title and abstract screening**: n=25 992
  - No: n=21 556

- **Yes for full text screening**: n=3424
  - No: n=3182
    - Not the right: design: n=1560
      - outcome: n=1132
      - exposure: n=289
      - population: n=58
      - analyses: n=29
      - Off topic: n=62
      - Duplicate: n=52

  - Kept for future systematic review on depression: n=217
  - YES: n=25

  - Duplicate analysis: n=3

- **Yes included**: n=23

**Grey literature databases**
- Open Grey: n=89
- WHO IRIS: n=54
- Grey literature report: n=39

- **Title, abstract and/or full text screening**: n=182
  - No: n=182

- **New references from the 74 lists of references**: n=2293
  - No: n=2090

- **Yes for full text screening**: n=203
  - No: n=202
    - Not the right: design: n=45
      - outcome: n=110
      - exposure: n=37
      - population: n=0
      - analyses: n=1
      - Off topic: n=5
      - Duplicate: n=2

  - Kept for future systematic review on depression: n=1
  - YES: n=1

- **Yes included**: n=23

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*a* From the February 2019 update

*b* Definition of reasons for exclusion: Not the right 1) study design: cross sectional, ecological, intervention studies, case-control with a retrospective design, qualitative or case study, and not an original study; 2) outcome: all-cause absence, self-reported absence or reason for absence, mental health not evaluated, non-validated measure of mental health or off topic; 3) exposure: psychosocial stressors at work from at least one of the three considered models were not measured or were measured with a non-validated tool; 4) population: population of patients or of workers on sick leave, pregnant women, in a process of return to work; 5) analyses: association between psychosocial stressors at work and mental health not reported (not an objective of the study).
### Table 1. Characteristics and Results of the 23 Included Studies

<table>
<thead>
<tr>
<th>Study Author (year)</th>
<th>Population / Design</th>
<th>Psychosocial stressors at work</th>
<th>Sickness absence</th>
<th>Analyses / Results Model</th>
<th>Prevalent case excluded (PCE): Yes/No/Unclear</th>
<th>Covariates</th>
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<tbody>
<tr>
<td><strong>Roelen (2018)</strong> Norwegian SUrvey of Shift work, Sleep and Health (SUSSH) Norway ¹</td>
<td>Baseline: 2008, FU: 2 y, 2009-2010 Nurses working at least 50% of a full-time position, random sample 1533 / 5400 PB: 38%, MD: 26% 1381 / 145 (7 missing) Mean age: 33.1 y</td>
<td>Exposure at baseline JCQ ² PD: 5 items, score range 5-20, mean: 14.3 SS: 6 items, score range 6-24, mean: 17.4 JC: 6 items, score range 6-24, mean: 17.7, Excluded from analyses due to its low Cronbach’s α (0.52)</td>
<td>Mental health-related long-term sickness absence ≥17days, Statistics Norway records International Classification of primary care (ICPC) by general practitioner category P which corresponds to ICD-10 chapter-V (mental and behavioral disorders)</td>
<td>Cox proportional hazards model HR (95% CI) PCE: Unclear Age, sex, marital status, care for children at home 103 / 1533 PD: 1.05 (0.97-1.13) SS: 0.92 (0.87-0.97)</td>
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<td><strong>Vendrig (2018)</strong> NA Netherlands ³</td>
<td>Baseline: NA FU: 6 months Employees of a home care organization participating in a health survey 388 / NA PB: NA, MD: NA 287 / 101 Mean age: 42.2 y SES: NA</td>
<td>Exposure at baseline Well-Being Inventory (WBI), validated with JCQ ³ T-scores in continuous, mean: NA PD: 8 items, named job strain in this article JC: 5 items SS: 5 items</td>
<td>Absenteeism because of common mental disorder ≥6 weeks, diagnosis established by an occupational physician Codes: NA</td>
<td>Logistic regression, OR (95% CI) PCE: Yes Crude 7 / 388 PD: NA (0.93-1.14) JC: NA (0.83 -1.01) SS: NA (0.89-1.07)</td>
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<tr>
<td><strong>van Hoffen (2018)</strong> NA Netherlands ⁴</td>
<td>Baseline: 2010 FU: 2 y, Jan 2011 to Dec 2012 Workers in the distribution and transport sector who participated in a health survey in 2010 2782 / 4877 PB: 82%, MD: 31% 1547 / 1235 Mean age: 49.9 y</td>
<td>Exposure at baseline Questionnaire on the Experience and Evaluation of Work ⁵, Score in continuous expressed as % of the maximum scale score, range 0-100 Workload: 11 item, mean: 44.9 Work pace: 7 items, mean: 39.6 Variety of work: 6 items,</td>
<td>Mental long-term sickness absence ≥42 days, obtained from an occupational health register, medically certified by an occupational physician ICD-10 (F codes)</td>
<td>Logistic regression OR (95% CI) PCE: Yes Age, gender, education 73 / 2782 Workload: 1.03 (0.85-1.25) Work pace: 0.96 (0.81-1.15) Variety in work: 0.96 (0.82-1.12) Autonomy: 0.91 (0.70-1.05)</td>
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<tr>
<td>Study</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
<td>Sickness absence</td>
<td>Analyses / Results</td>
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| Ndjaboué (2017) | Quebec white-collar workers, Canada | Education: low: 52%; middle: 37%, high: 11% | mean: 32.0 Autonomy: 3 items, mean: 33.2 Participation in decision: 6 items, mean: 24.4 Learning opportunities: 4 items, mean: 15.3 SS supervisor: 5 items, mean: 48.1 SS co-workers: 3 items, mean: 53.5 | Participation in decision: 0.88 (0.72-1.07) Learning opportunities: 0.83 (0.65-1.05) SS supervisor: 0.93 (0.81-1.07) SS co-workers: 0.97 (0.85-1.11) |}

Baseline: could be at T0 (2000-2003), T1 (after 3 y) or T2 (after 5 y) FU: mean: 4.88 y White-collar workers from three public insurance organizations 2082 / 2515 PB:81%, FU: 86-85%, MD: 2% 1319 / 763 Men: <40 y: 29.1%; 40-49 y: 43.1%; ≥50 y: 27.8%; Women: <40 y: 35.9%; 40-49 y: 47.7%; ≥50 y: 16.5%; Education: Men: secondary or less: 12.2%; College: 32.2%; University: 55.6%; Women: secondary or less: 30.2%; college: 33.8%; university: 36%

Exposure at baseline JCQ French version 2-7 PD and JC: 9 items each, dichotomized using median split from external sample JS: quadrant: High strain: Men: 18.87% Women: 25.78%

Medically certified absence for mental disorders of ≥5 days Employer registers and phone interview with workers for unavailable diagnosis (5.3% of episodes of absence) ICD-10: F10-F19, F30-F39, F40-F48, F50-F59, F60-F69, F99, Z56.7, G47.9, Z65.8, R53

ANDersen-Gill Cox regression model, HR (95% CI)
PCE: Yes Age education, marital status, stressful events, homeload, smoking, BMI, sedentary behavior, alcohol intake All: 281 / 2085, Men: 59 / 763 JS: 2 categories: High strain: 0.71 (0.38-1.30) Quadrant: High strain: 0.68 (0.31-1.49) Active: 0.96 (0.47-1.95) Passive: 0.93 (0.47-1.85) Women: 222 / 1319 JS: 2 categories: High strain: 1.69 (1.29-2.21) Quadrant: High strain: 2.55 (1.55-4.20) Active: 1.65 (0.98-2.79) Passive: 1.59 (0.97-2.60) ERI: See Ndjaboué (2014)
<table>
<thead>
<tr>
<th>Study Author (year)</th>
<th>Cohort name</th>
<th>Country, (reference)</th>
<th>Population / Design</th>
<th>Psychosocial stressors at work</th>
<th>Sickness absence</th>
<th>Analyses / Results</th>
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<tr>
<td><strong>Ohta (2017)</strong></td>
<td>NA</td>
<td>Japan</td>
<td>Baseline: 2012</td>
<td>Exposure at baseline</td>
<td>At least one sickness absence for mental illness &gt;7 days</td>
<td>Logistic regression</td>
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<td>FU: 1 y, 2013</td>
<td>The Brief Job Stress</td>
<td>obtained from employees’ computerized records,</td>
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<td>Workers from an information</td>
<td>Questionnaire (BJSQ)</td>
<td>diagnosed by occupational</td>
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<td>technology company in Tokyo</td>
<td>10,11</td>
<td>physician</td>
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<td>1408 / 1667</td>
<td>JS: ratio: PD: 3 items / JC: 3</td>
<td>Codes: NA</td>
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<td>PB: 93.5%, FU: 84%, MD: NA</td>
<td>items, mean: 1.1</td>
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<td>247 / 1161</td>
<td>SS: 6 items, sum score, range:</td>
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<td>Mean age: 36.8 y</td>
<td>NA, mean: 16.0</td>
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<td>Job position:</td>
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<td>Management: 21%</td>
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<td>FU: 1 Jan 2005 to Dec 2011</td>
<td>Mean: 6.4 y</td>
<td>Government registers</td>
<td>HR (95% CI)</td>
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<td>Mean: 6.4 y</td>
<td>Blue- and white-collar workers</td>
<td>ICD-10 F32-F34</td>
<td>PCE: In sensitivity analyses only, but not for all models or all psychosocial stressors at work</td>
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<td>of 10 towns and 6 hospitals</td>
<td>of 2 time points continuous, 0-5, mean: 3.31</td>
<td>Age, sex, location of workplace, occupational status, education and size of residence</td>
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<td>24 895 / 71 705</td>
<td>OJ: mean of 2 time points</td>
<td>1-All: 282 / 24 895</td>
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<td>PB: 68%, FU: 80%, MD: 13%</td>
<td>continuous, 0-5, mean: 3.65</td>
<td>Men: 28 / 4624</td>
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<td>20 271 / 4624</td>
<td>OJ: 6 items, mean of 2 time</td>
<td>Women: 254 / 20 271</td>
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<td>Age: &lt;40 y: 16.6%;</td>
<td>points continuous, 0-5, mean:</td>
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<td>40-50 y: 36.2%;</td>
<td>3.65</td>
<td><strong>OJ: All</strong> 0.69 (0.58-0.82)</td>
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<td>50-60 y: 42.5%;</td>
<td>PI: 7 items, mean of 2 time</td>
<td><strong>Men: 0.49 (0.30-0.81)</strong></td>
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<td>≥60 y: 4.7%</td>
<td>points, continuous, 0-5, mean:</td>
<td><strong>Women: 0.71 (0.59-0.86)</strong></td>
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<td>Education:</td>
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<td>elementary: 8.5%;</td>
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<td>secondary: 34.2%</td>
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<td>tertiary: 57.3%</td>
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<td><strong>Mather (2015)</strong> Study of Twin Adults: Genes and Environment (STAGE) Sweden 13</td>
<td>Baseline: Nov 2004-May 2006 FU: Baseline to Dec 2010; =5 y Twins born between 1959 and 1985 from the population-based Swedish Twin Registry 11 729 / 42 582 PB: 59.9%, FU: NA, MD: 36% 5766 / 5963 Mean age: 35 y, range: 20-47 y Education: elementary: 5%; secondary: 48%; higher: 47%</td>
<td>Exposure at baseline JCQ Swedish version 14 JS: quadrant, median split, high strain: 31% PD: 5 items, continuous, 1-4, mean: 2.5 JC: 5 items, continuous, 1-4, mean: 1.9 SS: 6 items, continuous, 1-4, mean: 1.6 i=best; 4=worst IS: High strain + low social support: 17%</td>
<td>Sick leave spells due to mental disorder of ≥7 days Government registers ICD-10: F00-F99</td>
<td>Logistic regression OR (95% CI) PCE: Yes Age, sex, education, previous sick leave, self-rated health 972 / 11 729 JS: Passive: 1.02 (0.81-1.28) Active: 1.30 (1.02-1.67) PD: 1.41 (1.24-1.60) JC: 1.02 (0.90-1.17) SS: 1.15 (0.98-1.36) IS: 1.47 (1.16-1.88)</td>
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<td><strong>Janssens (2014) Belstress III Belgium 18</strong></td>
<td>Baseline: 2004-2005 FU: 1y after the completion of the questionnaire Workers of seven companies or public administrations 2640 / ≈ 9813 PB: 30.4%, FU: 96%, MD: 8% 1414 / 1226 Mean age: 43.3 y, range: 30-55 y Education: ≤3 y of secondary: 20.8%; Secondary complete: 34.7%;</td>
<td>Exposure at baseline JCQ French version 16 JS: PD/JC ratio, continuous, 0.13-1.58, mean: 0.46 PD: continuous, 5 items, 12-48, mean: 30.4 JC: continuous, 11 items, 24-96, mean: 68.2 SS: continuous, 8 items, 8-32, mean: 22.8 Siegrist’s questionnaire, French version</td>
<td>Long-term sickness absence due to mental disorders ≥15 days Employer registers and General practitioner of the worker for the cause Codes: NA</td>
<td>Logistic regression OR (95% CI) PCE: Unclear Age, alcohol consumption, baseline depressive symptoms JS: 1.06 (0.85-1.33) PD: 0.90 (0.71-1.15) JC (ref=low): 0.81 (0.65-1.02) SS (ref=low): 0.83 (0.65-1.05) E: 0.91 (0.71-1.17) R (ref=low): 0.76 (0.60-0.97) ERI: 1.11 (0.88-1.39)</td>
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<td>Study</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
<td>Sickness absence</td>
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<td><strong>Juvani (2014)</strong></td>
<td>Baseline: 2000-2002 FU: to Dec 2010, mean: 8.9 y Blue- and white-collar workers of 10 towns and 6 hospitals 1-Work-unit level exposure: 51 874 / 71 705 PB: 100%, FU: 99%, MD: 14% 39 089 / 12 785 Mean age: 44.3 y, range: 17-64 y Education: Primary: 13.7%; Secondary: 35.8% Tertiary: 50.5% 2-Individual level exposure: 35 260 / 71 705 PB: 68%, FU: 99%, MD: 42% W / M, age and SES: NA</td>
<td>Exposure at baseline Adapted from Siegrist’s questionnaire  ERI: E/R ratio in quartiles, Lowest (Q1): Work-unit level: 25% Individual level: 27% E: 1 item, quartiles R: 3 items, quartiles Mean or prevalence: NA</td>
<td>Disability pension due to depression, &gt;300 days Government registers ICD-10 F32-F34</td>
<td>Cox proportional hazards model  HR (95% CI)  PCE: Yes  Age, sex, place of residence, occupational status, education, income, baseline physical illness, baseline mental disorder, type of employer, type of work contract, size of work unit, mean age of employees in work unit, proportion of fixed term workers in work unit and work unit level of job strain 1-Work-unit level: 890 / 51 874  ERI: Q2: 1.21 (0.98-1.49) Q3: 1.20 (0.97-1.49) <strong>Q4: 1.63 (1.31-2.04)</strong> E and R: SES not included in the model  E: Q2: 1.02 (0.84-1.23) Q3: 0.90 (0.74-1.10) Q4: 0.99 (0.82-1.20) <strong>R: Q1: 1.72 (1.42-2.08)</strong> Q2: 1.28 (1.05-1.57)</td>
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<td>Study Author (year)</td>
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<td><strong>Ndjaboué (2014)</strong> Quebec white-collar workers, Canada 18</td>
<td>Baseline: could be at T0: (2000-2003), T1 (after 3 y) or T2 (after 5 y) FU: mean: 4.88 y White-collar workers from three public insurance organizations 2086 / 3987 PB: 80.9%, FU: 86-85%, MD: 5% 1321 / 765 Age range: 41-56 y Men: &lt;40 y: 29%; 40-49 y: 43%; ≥50 y: 28%; Women: &lt;40 y: 35.8%; 40-49 y: 47.6%; ≥50 y: 16.6%;</td>
<td>Exposure at baseline Adapted from the French version of Siegrist’s questionnaire, 13 items, ERI: E/R ratio, ≤1 or &gt;1 ERI &gt;1: Men: 27.3%; Women: 28.3% E: 4 items, tertiles Men: High: 40.5%; Women: High: 36.3% R: 11 items, tertiles Men: low: 36.7%; Women: low: 32.3%;</td>
<td>Medically certified absence for mental disorders of ≥5 days Employer registers and phone interview with workers for unavailable diagnosis (5.34% of episodes of absence) ICD-10: F10-F19, F30-F39, F40-F48, F50-F59, F60-F69, F99, Z56.7, G47.9, Z65.8, R53</td>
<td>Cox proportional hazard model HR (95% CI) PCE: Yes Age, sex, education, All: 281 / 2085 Men: 59 / 765 Women: 222 / 1321 ERI: All: 1.42 (1.11-1.85) Men: 1.20 (0.69-2.09) <strong>Women: 1.47 (1.11-1.94)</strong> E: (ref=low) , All: med: 1.13 (0.83-1.54); high: 1.10 (0.81-1.50); Men: med: 1.12 (0.57-2.19); high: 0.89 (0.45-1.74); Women: med: 1.15 (0.81-1.67); high: 1.18 (0.83-1.67); R: All: med: 1.29 (0.95-1.76); low: 1.57 (1.17-2.10);</td>
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<td>Study Author (year)</td>
<td>Cohort name (reference)</td>
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<td>Elovainio (2013)</td>
<td>Finnish Public Sector Study (FPS) Finland</td>
<td>Education: Men: secondary or less: 12.16%; College: 32.3%; University: 55.6%; Women: Secondary or less: 30.2%; College: 33.9%; University: 35.9%</td>
<td>Exposure combined from 2 time points (2000-2002 and 2004) Moorman’s (1991) scales 1-Self reported RJ: 6 items, mean of 2 time points, continuous, 0-5, mean: 3.65 PJ: 7 items, mean of 2 time points, continuous, 0-5, mean: 3.03 2-Agregated from co-workers response RJ: 6 items, mean of 2 time points, continuous, 0-5, mean: 3.66 PJ: 7 items, mean of 2 time points, continuous, 0-5, mean: 3.01</td>
<td>1-Long-term sickness absence due to a diagnosed mental disorder, ≥9 days Government registers ICD-10 codes: F00-F99 855 cases 2-Long-term sickness absence due to diagnosed depression, ≥9 days Government registers ICD-10 codes: F32-F34</td>
<td>1-Logistic regression, OR (95% CI) PCE: Yes Age, sex, type of employment contract, SSE (five-digit occupational titles), length of employment, size of work place 1-Self-reported: 396 / 17 641 All mental health diagnosis: RJ: 0.76 (0.67-0.86) PJ: 0.79 (0.69-0.92) Depression only: RJ: 0.78 (0.64-0.96) PJ: 0.75 (0.58-0.97) 2-Agregated from co-workers: All mental health diagnoses: 396 / 17 641 RJ: 0.84 (0.63-1.10) PJ: 0.83 (0.61-1.13) Depression only: RJ: 1.29 (0.78-2.13) PJ: 1.34 (0.77-2.33)</td>
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<td>Pension and Sickness Absence (STODS) Sweden ²⁰</td>
<td>Twins born between 1925 and 1958 from the population-based Swedish Twin Registry 42 715 / 59 893 PB: 100%, FU: 100%, MD: 1% 21 117 / 21 598 Mean age in 1990: 45 y, range: 32-62 y Education: DP with mental diagnosis: high: 28%, intermediate: 42%, low: 30%; DP other diagnoses: high: 13%, intermediate: 42%, low: 45%; No DP: high: 25%, intermediate: 42%, low: 33%;</td>
<td>population-based survey of self-reported PD, JC and SS assigned to individual in the study population according to occupational codes. ²¹ PD, JC and SS: continuous, 0-10 Means: DP mental diagnosis: PD: 6.05; JC: 6.42; SS: 6.48 DP other diagnoses: PD: 6.27; JC: 6.19; SS: 6.40 No DP: PD: 6.00; JC: 6.66; SS: 6.33 JS: quadrant, high strain; DP mental diagnosis: 12% DP other diagnosis: 14% No DP: 14% IS: high strain + low SS DP mental diagnosis: 9% DP other diagnoses: 9% No DP: 7%</td>
<td>Government registers ICD-10: F00-F99</td>
<td>PCE: Yes Age, sex, education, marital status, N children living at home and type of living area 1420 / 42 715 JS: Passive: 1.26 (1.05-1.51) Active: 0.90 (0.74-1.08) High strain: 0.89 (0.70-1.14) PD: 1.11 (1.02-1.21) JC: 0.91 (0.87-0.96) SS: 1.12 (1.01-1.24) IS: 1.31 (1.04-1.65)</td>
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<td>Lahelma (2012) Helsinki Health Study Finland ²²</td>
<td>Baseline: 2000, 2001, 2002 FU: until end of 2008 Blue- and white-collar workers of Helsinki 6525 / 13 344 PB: 67%, FU: 74%, MD: 0% 5122 / 1403 Aged 40, 45, 50, 55 or 60 y at baseline Occupational class:</td>
<td>Exposure at baseline Based on JCQ PD: 9 items, dichotomized to upper quartile, High PD: Men: 20%, Women: 23% JC: 9 items, dichotomized to upper quartile, Low JC: Men: 24%, Women: 21% SS from Sarason’s SS: 4 items, dichotomized to upper quartile, Low SS:</td>
<td>Disability retirement due to mental disorder Minimal days: NA Government registers ICD-10: F00-F99</td>
<td>Cox proportional hazards model HR (95% CI) PCE: Yes Age as time scale, sex, shift work, temporary work contract, working overtime, hazardous exposure, physical workload, computer work, job control, psychological demand, social</td>
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<td>Study Author (year)</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
<td>Sickness absence</td>
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<td>Study Author (year)</td>
<td>Cohort name Country, (reference)</td>
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<td>Analyses / Results</td>
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<td><strong>Inoue (2010)</strong></td>
<td>Japan Work Stress and Health Cohort (JSTRESS) Study Japan 24</td>
<td>Baseline: 1996-1998 FU: from baseline to 1999-2003, mean: 5.14 y Factory workers 15 256 / 1 = 26 788 PB: 85%, FU: NA, MD: 19% Men only, Mean age: 40.5 y; 45 et + y: 35.7%; 35-44 y: 40.3%; 18-34 y: 24% Education: &gt;12 y: 37.5%; ≤12 y: 62.5%</td>
<td>Exposure at baseline, National Institute for Occupational Safety and Health Generic Job Stress Questionnaire (NIOSH-GJSQ), Japanese version 25 JS: ratio in tertiles, mean: 0.85 PD: 11 items, tertiles, 11-55 mean: 37.4 JC: 16 items, tertiles, 6-42 mean: 47.5 Supervisor SS: 4 items, tertiles, 4-20; mean: 14.8 Co-worker SS: 4 items, tertiles, 4-20; mean: 15.2</td>
<td>Long-term sick leave due to depressive disorder, ≥30 days Employer register ICD-10: F32</td>
<td>Cox proportional hazards model HR (95% CI) PCE: Yes Age, education, marital status, occupation, chronic physical condition 47 / 15 256 JS: high: 2.22 (1.02-4.83) med: 1.45 (0.65-3.24) PD: high: 1.01 (0.49-2.04) med: 0.99 (0.49-2.01) JC: high: 0.27 (0.11-0.67) med: 0.78 (0.41-1.46) Supervisor SS: high: 1.11 (0.55-2.23) med: 1.21 (0.61-2.40) Co-worker SS: high: 1.01 (0.50-2.05) med: 1.01 (0.51-2.00)</td>
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<td><strong>Kivimaki (2010)</strong></td>
<td>Register study on overcrowding and antidepressants</td>
<td>Baseline: 2004 FU: 1 y Female nurses of 203 somatic illness ward in 16 hospitals</td>
<td>Exposure at baseline Based on JCQ PD: 3 items, continuous, 1-5 mean: 3.6</td>
<td>1-Absence due to any mental or behavioral disorder, &gt;9 days Government registers ICD-10: F00-F99</td>
<td>1- Conventional probit regression analysis Probit index (95% CI)</td>
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<td>Study</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
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<td><strong>Finland</strong></td>
<td>2784 / ≈ 3978</td>
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<td>2-Absence due to depressive disorder, &gt;9 days</td>
<td>2- Instrumental probit regression analysis (instrument: overcrowding)</td>
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<tr>
<td>26</td>
<td>PB: 78%, FU: NA, MD: 5%</td>
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<td>Government registers</td>
<td>Probit index (95% CI)</td>
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<td>Women only</td>
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<td>ICD-10: F32-F34</td>
<td>PCE: Yes/No/Unsure</td>
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<td>Mean age: 42.2 y, range: 20-64 y</td>
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<td>Covariates</td>
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<td>SES: All nurses</td>
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<td>N cases / n analyzed</td>
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<td><strong>Clumeck (2009)</strong></td>
<td>Baseline: 1994-1998</td>
<td>Exposure at baseline</td>
<td>Long-term sick leave due to depression, &gt;28 days</td>
<td>Logistic regression,</td>
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<td><strong>Belstres I</strong></td>
<td>FU: mean: 3y: A subsample of 11 companies from the 24 companies of the Belstresses I: large variety of the Belgian work force.</td>
<td>Based on JCQ, French version</td>
<td>Employer register</td>
<td>OR (95% CI)</td>
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<tr>
<td>Belgium 27</td>
<td>8550 / ≈ 44 623</td>
<td>JS: quadrant, median split</td>
<td>Medico-administrative data</td>
<td>PCE: Unsure</td>
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<td></td>
<td>PB: 48%, FU: ND, MD: 9%</td>
<td>High strain: 24.2%</td>
<td>Codes: NA</td>
<td>Stratified for sex,</td>
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<td>2447 / 6103</td>
<td>PD: 5 item, tertiles: T3: 30.1%</td>
<td>Age, living situation, occupation.</td>
<td>All: 200 / 8550</td>
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<td>Age range: 35-59 y</td>
<td>JC: 9 items, tertiles: T1: 35.9%</td>
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<td>Men: 100 / 6103</td>
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<td>Men: &lt;45 y: 44%; &gt;45 y:56%;</td>
<td>SS: 8 items, tertiles: T1: 40.7%</td>
<td>Women: 100 / 2447</td>
<td>Women: 100 / 2447</td>
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<td></td>
<td>Women: &lt;45 y: 58%;</td>
<td>IS: 4 categories, IS: 14.0%</td>
<td>JS: Men:</td>
<td>JS: Men:</td>
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</tbody>
</table>

**Analyses / Results**
- Model: Prevalent case excluded (PCE): Yes/No/Unclear
- Covariates:
  - N cases / n analyzed
  - Results:
    - Logistic regression, OR (95% CI)
    - PCE: Unclear
    - Stratified for sex
    - Age, living situation, occupation.
    - All: 200 / 8550
    - Men: 100 / 6103
    - Women: 100 / 2447
    - JS: Men:
      - Passive: 3.27 (1.41-7.54)
      - Active: 2.11 (0.88-5.03)
    - High strain: 4.58 (2.01-10.46)
<table>
<thead>
<tr>
<th>Study</th>
<th>Population / Design</th>
<th>Psychosocial stressors at work</th>
<th>Sickness absence</th>
<th>Analyses / Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wannstrom (2009)</td>
<td>Occupational level (ISCO): Men: Executives: 21.7%; White-collars: 51%; Blue-collars: 27.3%; Women: Executives: 12.7%; White-collars: 77.2%; Blue-collars: 10.1%</td>
<td>Exposure at baseline General Nordic Questionnaire for Psychological and Social Factors at Work (QPSNordic) 28 PD: Quantitative demand: 4 items, mean: 3.06; Decision demand: 3 items, mean: 3.63; Learning demand: 3 items, mean: 2.64 JC: Control of decision: 4 items, mean: 2.83; Control of pacing: 4 items, mean: 2.99</td>
<td>Long-term sick leave due to psychiatric disorder ≥90 days Insurance company database ICD-10 F00-F99</td>
<td>Women: Passive: 1.56 (0.68-3.55) Active: 0.98 (0.40-2.37) High strain: 2.00 (0.90-4.43) PD: Men: high: 1.50 (0.82-2.70) med: 1.91 (1.12-3.27) Women: high: 1.17 (0.66-2.07) med: 1.08 (0.63-1.86) JC: Men: low: 2.83 (1.48-5.42) med: 1.91 (0.99-3.70) Women: low: 2.32 (1.10-4.90) med: 1.03 (0.46-2.29) SS: Men: low: 1.10 (0.63-1.91) med: 0.59 (0.31-1.12) Women: low: 0.98 (0.53-1.80) med: 1.21 (0.65-2.22) IS: Men: 2.86 (1.58-5.15) Women: 1.65 (0.93-2.92)</td>
</tr>
<tr>
<td>Study Author (year)</td>
<td>Cohort name</td>
<td>Country, (reference)</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
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<td>Years, Follow-up (FU)</td>
<td>Measurement time Tool</td>
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<tr>
<td>Bourbonnais (2005)</td>
<td>Quebec Nurses Study</td>
<td>Canada 29</td>
<td>Baseline: 1997 and 1998, considered as time-varying FU: 17 months from 1997 Nurses of 13 health facilities in Quebec City 1314 / 3152 PB: 70%, FU: 66%, MD: NA 1235 / 79 Mean age: 42 y; range: 22-58 y SES: All nurses</td>
<td>Exposure at two time points (1997 and 1998), considering as time-varying JCQ French version ² mean or prevalence: NA JS: quadrant PD: 9 items, dichotomized, median split, reference population JC: 9 items, dichotomized, median split, reference population SS: 8 items, dichotomized, median split Siegrist’s questionnaire, mean or prevalence: NA R: 11 items, dichotomized, median split ERI: PD/R ratio, dichotomized: ≤1, &gt;1</td>
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<tr>
<td>Boedeker (2001) Collaborative Program</td>
<td>Occupation and Health</td>
<td>Germany ³¹</td>
<td>Baseline: 1995-1997 FU: 3 y from baseline Employees of five companies from the metal processing and retail trade 42 508 / 42 508 PB: 100%, FU: NA, MD: 0%</td>
<td>Exposure at baseline Job exposure matrix, based on JCQ ³² on 79 job types and 70 workload items Prevalence or mean: NA PD: items: NA, 0-100, five or two categories</td>
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<tr>
<td>Study Author (year)</td>
<td>Population / Design</td>
<td>Psychosocial stressors at work</td>
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<td><strong>Cohort name</strong></td>
<td><strong>Years, Follow-up (FU)</strong></td>
<td><strong>Measurement time</strong></td>
<td><strong>Name</strong></td>
<td><strong>Model</strong></td>
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<td><strong>Country, (reference)</strong></td>
<td><strong>Type of workers</strong></td>
<td><strong>Tool (reference of validation)</strong></td>
<td><strong>Minimum absence duration</strong></td>
<td><strong>Measure</strong></td>
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<tr>
<td>Bourbonnais (2001)</td>
<td>Quebec Nurses Study Canada 33</td>
<td>Nurses employed in six acute care hospitals in the province of Quebec</td>
<td>Exposure at baseline JCQ French version 2 exposure at baseline JCQ French version 2</td>
<td>Certificated sick leave due to mental disorder, &gt;3-5 days</td>
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<td>Bourbonnais (2001)</td>
<td>Quebec Nurses Study Canada 33</td>
<td>Nurses employed in six acute care hospitals in the province of Quebec</td>
<td>Exposure at baseline JCQ French version 2 exposure at baseline JCQ French version 2</td>
<td>Certificated sick leave due to mental disorder, &gt;3-5 days</td>
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<td>Exposure at baseline JCQ French version 2 exposure at baseline JCQ French version 2</td>
<td>Certificated sick leave due to mental disorder, &gt;3-5 days</td>
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<td>Participation at baseline (PB), missing data (MD)</td>
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<td>Participation at baseline (PB), missing data (MD)</td>
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<td>Results in bold are statistically significant</td>
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Abb. SES: socio-economic status; PP: participation proportion; y: year, FU: follow-up, ICD: International Classification of Diseases; NA: not available; JCQ: Job Content Questionnaire; ERI: Effort-reward imbalance; DCSQ: Demand-Control-Support Questionnaire; HR: hazard ratio; OR: odds ratio CI: confidence interval; OJ: organizational justice; RJ: relational justice; PJ: procedural Justice; JS: job strain; PD: psychological demand; JC: job control; SS: social support at work; IS: iso-strain; E: effort; R: reward; ERI: effort-reward imbalance; DP: disability pension; JEM: Job Exposure Matrix; PB: participation at baseline, MD: missing data; Q2: 2nd quartile; Q3: 3rd quartile; Q4: 4th quartile
eAppendix 1. Search Strategy for Each Electronic Database, First Run in October 2017 and Updated for Medline, Embase and PsycInfo in February 2019

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<th>Medline OVID 2017-10-31</th>
<th>Results</th>
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<td>(job adj2 (control or security or insecurity or strain or stress or stressor or stressors or demand or demands or demanding)).tw.</td>
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<td>2</td>
<td>*workload/ or workload.tw.</td>
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<td>(work adj2 (stress or stressor or stressors)).tw.</td>
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<tr>
<td>5</td>
<td>*employment/ or *occupations/</td>
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Antidepress*.tw. 62343
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| # line | 6 | TS=(personnel OR employee* OR worker*) | 393 079 |
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| # line | 8 | TITLE: (work) | 357 181 |
| # line | 9 | TOPIC: (workplace*) | 59 881 |
| # line | 10 | #9 OR #8 OR #7 OR #6 OR #5 | 997 150 |
| # line | 11 | TOPIC: (psychosocial) | 91 908 |</p>
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OR ab(demand* NEAR/2 latitude*) OR ti(demand* NEAR/2 control) OR
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OR ab(psychological* NEAR/2 demand*)) OR (SU.EXACT("Equity" OR
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"Sexual Inequality" OR "Social Inequality") OR ti(equity OR inequity OR inequities)
OR ab(equity OR inequity OR inequities)) OR
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absence) AND (all(disability) or all(sickness) or all(sick)) OR (ab(sick-
list*)) OR (ti(psychotrop*) OR ab(psychotrop*) OR
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or all(sickness) or all(sick)) OR (ti(sick-list*)) OR (ab(leave or leaves or
absence) AND (all(disability) or all(sickness) or all(sick)) OR (ab(sick-
list*)) OR (ti(psychotrop*) OR ab(psychotrop*) OR
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OR ab(psychopathol*)) OR (ti("psychological disorder*")) OR
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ab("psychologic* disorder*")) OR (SU.EXACT("Depression
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# eAppendix 2. Completed ROBINS-I Tool Assessment Grid

## The Risk Of Bias In Non-randomized Studies – of Interventions (ROBINS-I) assessment tool (version for cohort-type studies)

**Version 19 September 2016**

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### ROBINS-I tool (Stage I): At protocol stage

**Specify the review question**

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<th>Category</th>
<th>Details</th>
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<tr>
<td>Participants</td>
<td>Working adults of all types, from any country. Must not be a population of workers who are off work for illness, who are in a process of return to work or a population of pregnant women.</td>
</tr>
</tbody>
</table>
| Experimental intervention | **Type**: Exposure must have been measured with a validated tool or a proxy of a validated tool based on one of three models studied, namely the Job Demand-Control-Support (JDCS), the Effort-Reward imbalance (ERI), and the Organisational justice models. The validity of this tool must have been demonstrated in a study on the psychometric qualities of the instrument (internal consistency, factorial validity, predictive validation and discriminant validity). If a translated version was used, it must also be validated.  
**Frequency**: Participants must have been exposed for a sufficient amount of time to allow the occurrence of the outcome. In the case of absences for mental disorders, we consider one year of exposure to be enough. Considering that almost all studies measured exposure at a single time point, participants had to have been employed for at least one year in the same organization.  
**Consideration of past exposure**: To consider previous exposure, a cohort must be 1) comprised of new workers never before exposed or 2) evaluate the change in the exposure from a known past exposure. The consideration of past exposure is difficult in this field of research.  
**Measurement time**: The exposure must have been measured at the beginning of the study, without participants knowing the nature of the study.  
**Healthy Cohort in Exposure Measurement**: Participants should not have a mental disorder when measuring exposure (i.e. exposure evaluators are not influenced by knowledge of the outcome). Prevalent cases must be excluded. |
| Comparator                | Exposed and unexposed workers originate from the same study population.                                                             |
| Outcomes                  | **Absences**: Information collected in objective administrative files. The people who collect the information should not be aware of the exposure level of the participants. Information must have been collected in the same way for both exposure groups. |
**Diagnostics that cause the absence:** The diagnosis must have been made by a physician and should not be self-reported by the participants. The physician should not be aware of the exposure level of participants.

List the confounding domains relevant to all or most studies

**Major confounding domains** (for which we want the analyses to be compulsorily adjusted): Socio-economic status (ideally education or income, but we also accept occupation), Age and Sex.

**Additional confounding domains,** but optional: Work Environment Factors, Family Charge, Stressful Event, Social support outside work

**Intermediate domains (should not be adjusted for or should be included in a separate statistical model):** Lifestyle habits (smoking, alcohol, and physical activity), Comorbidities (cardiovascular disease, diabetes, musculoskeletal disorders, etc.) and Body mass index (BMI).

List co-interventions that could be different between intervention groups and that could impact on outcomes

Non-Applicable

Specify the outcome

Specify which outcome is being assessed for risk of bias (typically from among those earmarked for the Summary of Findings table). Specify whether this is a proposed benefit or harm of intervention.

**Outcome:** Sickness absence due to a mental disorder as diagnosed by a doctor and certified by a doctor as the reason for the work absence. All diagnoses must be coded according to ICD-10 (F00-F99) or ICD-9 (300-316).

Specify the numerical result being assessed

In case of multiple alternative analyses being presented, specify the numeric result (e.g. RR = 1.52 (95% CI 0.83 to 2.77) and/or a reference (e.g. to a table, figure or paragraph) that uniquely defines the result being assessed.

Hazard ratio (HR), Odds ratio (OR), Risk ratio (RR), Rate ratio (Poisson regression), minimally adjusted for age, sex and SES, with prevalent cases excluded when possible and with individual level exposure instead of aggregated level.
Preliminary consideration of confounders

Complete a row for each important confounding domain (i) listed in the review protocol; and (ii) relevant to the setting of this particular study, or which the study authors identified as potentially important.

“Important” confounding domains are those for which, in the context of this study, adjustment is expected to lead to a clinically important change in the estimated effect of the intervention. “Validity” refers to whether the confounding variable or variables fully measure the domain, while “reliability” refers to the precision of the measurement (more measurement error means less reliability).

<table>
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<td>Lifestyle habits (alcohol, smoking, physical activity)</td>
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<td>Comorbidity (cardiovascular disease, diabetes, physical illness, self-rated health, musculoskeletal problem, etc.)</td>
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<tr>
<td>BMI</td>
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</table>

*In the context of a particular study, variables can be demonstrated not to be confounders and so are not included in the analysis: (a) if they are not predictive of the outcome; (b) if they are not predictive of intervention; or (c) because adjustment makes no or minimal difference to the estimated effect of the primary parameter. Note that “no statistically significant association” is not the same as “not predictive.”*
Risk of bias assessment

Responses underlined in green are potential markers for low risk of bias, and responses in red are potential markers for a risk of bias. Where questions relate only to signposts to other questions, no formatting is used.

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<th>Signalling questions</th>
<th>Description</th>
<th>Response options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bias due to confounding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Is there potential for confounding of the effect of intervention in this study?</td>
<td>YES: The answer will always be YES in observational studies.</td>
<td>Y / PY / PN / N</td>
</tr>
<tr>
<td>If N/PN to 1.1: the study can be considered to be at low risk of bias due to confounding and no further signalling questions need to be considered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Y/PY to 1.1: determine whether there is a need to assess time-varying confounding:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2. Was the analysis based on splitting participants’ follow-up time according to intervention received?</td>
<td>NO: If exposure is measured at recruitment only, or if exposure is measured at two or more times, but the authors computed an average exposure over measurement times. YES: If the exposure is measured at several times and considered cumulatively or combined.</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
<tr>
<td>If N/PN, answer questions relating to baseline confounding (1.4 to 1.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Y/PY, go to question 1.3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3. Were intervention discontinuations or switches likely to be related to factors that are prognostic for the outcome?</td>
<td>IF YES at question 1.2: YES: Always yes. It can always be assumed that the change in exposure status may be influenced by the presence of depressive symptoms. IF NO at question 1.2: NA</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
<tr>
<td>If N/PN, answer questions relating to both baseline and time-varying confounding (1.7 and 1.8)</td>
<td></td>
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</table>

Questions relating to baseline confounding only
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4. Did the authors use an appropriate analysis method that controlled for all the important confounding domains?</td>
<td>Appropriate analyses: adjustment, restriction, weighting, backward change in estimate procedure. Not appropriate: Forward change in estimate procedure, one factor at a time in the crude model. Significant domains of confusion: age, sex, socio-economic status (SES). <strong>YES:</strong> if appropriate analysis for age, sex and SES. <strong>NO:</strong> if any of these factors were not considered or not considered appropriately in the analysis.</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
<tr>
<td>1.5. If <strong>Y/PY</strong> to 1.4: Were confounding domains that were controlled for measured validly and reliably by the variables available in this study?</td>
<td>Age: by register or self-reported, continuous or with at least 3 categories. Sex: by register or self-reported. SSE: Self-reported for education and occupation are considered acceptable. Register for occupation is acceptable, income: self-reported suboptimal, but there is not really any other source of information possible. Therefore we consider self-reported income acceptable. Should be reported with at least 3 categories. <strong>YES:</strong> if all three measures are relatively valid. <strong>NO:</strong> if one of the measures seems very invalid or poorly measured or misclassified (e.g. age reported dichotomously).</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
<tr>
<td>1.6. Did the authors control for any post-intervention variables that could have been affected by the intervention?</td>
<td>Potentially Intermediate Variables: Lifestyle, BMI, and Comorbidities. <strong>NO:</strong> if there is a model with appropriate analyses for age, sex and SES, <em>without</em> potentially intermediate variables. <strong>YES:</strong> if there are no model with appropriate analyses for age, sex and SES, <em>without</em> potentially intermediate variables.</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
<tr>
<td><strong>Questions relating to baseline and time-varying confounding</strong></td>
<td><strong>NO:</strong> will almost always be no, because the appropriate analysis would be marginal structural models and to our knowledge it has not yet been done in our field of research. <strong>YES:</strong> Marginal structural models or Cox model with exposure and confounders considered time-varying, with point and non-combined or cumulative exposure.</td>
<td>NA / Y / PY / PN / N / NI</td>
</tr>
</tbody>
</table>
| Risk of bias judgment | Low: No confounding expected: NEVER  
Moderate: (i) Confounding expected, all known important confounding domains appropriately measured and controlled for;  
and  
(ii) Reliability and validity of measurement of important domains were sufficient, such that we do not expect serious residual confounding.  
Serious: (i) At least one known important domain was not appropriately measured, or not controlled for;  
or  
(ii) Reliability or validity of measurement of an important domain was low enough that we expect serious residual confounding.  
Critique: (i) Confounding inherently not controllable  
or  
(ii) The use of negative controls strongly suggests unmeasured confounding. | Low / Moderate / Serious / Critical / NI |

| Bias in selection of participants into the study | 2.1. Was selection of participants into the study (or into the analysis) based on participant characteristics observed after the start of intervention?  
If N/PN to 2.1: go to 2.4  
YES: Always yes in our case, except with a cohort of new workers or have selected a cohort of participants who would all be exposed, or all not exposed at recruitment, and analyze the change in exposure over time.  
NO: Due to our field of study, this answer should always be no, except with a cohort of new workers or having selected a cohort of participants who would all be exposed or all unexposed at recruitment, and analyzed the change in exposure over time. | Y / PY / PN / N / NI  
NA / Y / PY / PN / N / NI |

| 2.2. If Y/PY to 2.1: Were the post-intervention variables that influenced selection likely to be associated with intervention?  
2.3 If Y/PY to 2.2: Were the post-intervention variables that influenced selection likely to be influenced by the outcome or a cause of the outcome?  
2.4. Do start of follow-up and start of intervention coincide for most participants?  
2.5. If Y/PY to 2.2 and 2.3, or N/PN to 2.4: Were adjustment techniques used that are likely to correct for the presence of selection biases? | YES: Always yes, because we can expect more exposed people to leave work before the start of the study, or to participate less in the study.  
NO: Always no, because we never know the characteristics of the participants before the start of the study. | Y / PY / PN / N / NI  
NA / Y / PY / PN / N / NI |

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<p>| Risk of bias judgment | Note: In occupational studies, start of follow-up and start of exposure rarely coincide. For this reason, we choose to start the risk of bias in selection of participants into the study to a moderate level. However, in order to increase discrimination property in this risk of bias, the criterion of the coincidence between start of follow-up and start of intervention will not be further considered. Low: Never, as explained in the note above. (i) All participants who would have been eligible for the target trial were included in the study; and (ii) For each participant start of follow up and start of intervention coincided. Moderate: Participation rates of ≥80% or ≥70% with a comparison showing that refusals are similar to those included for age, sex and socio-economic status, or for exposure and outcome (i) Selection into the study may have been related to intervention and outcome; and The authors used appropriate methods to adjust for the selection bias; or (ii) Start of follow up and start of intervention does not coincide for all participants; and (a) the proportion of participants for which this was the case was too low to induce important bias; (80%) or (b) the authors used appropriate methods to adjust for the selection bias; or (c) the review authors are confident that the rate (hazard) ratio for the effect of intervention remains constant over time. Serious: Participation rates between 80-60% or 60%-50% with a comparison showing that refusals are similar to those included for age, sex and socio-economic status, or for exposure and outcome (i) Selection into the study was related (but not very strongly) to intervention and outcome; and This could not be adjusted for in analyses; or (ii) Start of follow up and start of intervention does not coincide; and A potentially important amount of follow-up time is missing from analyses; and The rate ratio is not constant over time. Critical: Participation rates of less &lt;60% or &lt;50% with a comparison showing that refusals are similar to those included for age, sex and socio-economic status, or for exposure and outcome (i) Selection into the study was very strongly related to intervention and outcome; and This could not be adjusted for in analyses; or (ii) A substantial amount of follow-up time is likely to be missing from analyses; and The rate ratio is not constant over time. |
| 3.1 Were intervention groups clearly defined? | YES: Exposure must have been measured by a validated tool based on one of three models studied. The validity must have been demonstrated in a study on the psychometric qualities of the instrument (internal consistency, factorial validity, predictive validation and discriminant validity). Note: If the tool used is an original validated tool, but the translation has not been validated, it is considered to be a well-defined intervention, but with a moderate level of risk. NO: Exposure measured with a proxy or translation whose validation has not been demonstrated, or by using different questionnaires from one participant to another. Exposure measured by a matrix based on job titles or based on the response of colleagues in the same work unit, as there is a risk of significant misclassification. | Y / PY / PN / N / NI |
| 3.2 Was the information used to define intervention groups recorded at the start of the intervention? | YES: If exposure is measured at beginning of follow-up NO: If exposure is measured retrospectively | Y / PY / PN / N / NI |
| 3.3 Could classification of intervention status have been affected by knowledge of the outcome or risk of the outcome? | NO: If prevalent cases were excluded PY: If the analyses are adjusted for mental health to recruitment only without the exclusion of prevalent cases YES: If prevalent cases are not excluded and no sensitivity analysis was conducted according to the mental health status at recruitment. In this case, the disease may have affected the response to the exposure questions. | Y / PY / PN / N / NI |</p>
<table>
<thead>
<tr>
<th>Risk of bias judgment</th>
<th><strong>Low</strong>: (i) Intervention status is well defined; and (ii) Intervention definition is based solely on information collected at the time of intervention. <strong>Moderate</strong>: (i) Intervention status is well defined; (Note: here we included the use of validated questionnaire, but without validation of the translation) and (ii) Some aspects of the assignments of intervention status were determined retrospectively. <strong>Serious</strong>: (i) Intervention status is not well defined; or (ii) Major aspects of the assignments of intervention status were determined in a way that could have been affected by knowledge of the outcome. <strong>Critical</strong>: (Unusual) An extremely high amount of misclassification of intervention status, e.g. because of unusually strong recall biases.</th>
<th>Low / Moderate / Serious / Critical / NI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bias due to deviations from intended interventions</strong>: <strong>NA</strong>: Hard to apply in our field of research. Exposure deviations are almost always natural and expected, unless there is an intervention by a researcher that is differential depending on the level of exposure. This criterion will always be at a moderate level of risk. Therefore, it is not systematically evaluated in the included studies.</td>
<td><strong>Bias due to missing data</strong>: <strong>NOTE</strong>: This bias domain concerned participation in the follow-up and number and processing of missing data. The rate of participation in recruitment has been already taken into account in the selection into the study bias domain.</td>
<td><strong>5.1 Were outcome data available for all, or nearly all, participants?</strong> <strong>YES</strong>: If participation at follow-up is 95% and over and/or data is complete for 95% of participants. Data complete for 90% of participants with a comparison between those included and excluded showing similarity for the three confounders important or for exposure and for the outcome will be considered adequate. <strong>NO</strong>: If less than 90% of participants are included in the analysis or less than 95% without comparison or with a comparison showing differences</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td>YES</td>
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<tr>
<td>5.2</td>
<td>Were participants excluded due to missing data on intervention status?</td>
<td>If there were missing data on exposure</td>
</tr>
<tr>
<td>5.3</td>
<td>Were participants excluded due to missing data on other variables needed for the analysis?</td>
<td>If there were missing data on covariates</td>
</tr>
<tr>
<td>5.4</td>
<td>If PN/N to 5.1, or Y/PY to 5.2 or 5.3: Are the proportion of participants and reasons for missing data similar across interventions?</td>
<td>If there is a comparison between included and excluded participants due to missing data that shows participants are similar for all three important confounders or for exposure and outcome</td>
</tr>
<tr>
<td>5.5</td>
<td>If PN/N to 5.1, or Y/PY to 5.2 or 5.3: Is there evidence that results were robust to the presence of missing data?</td>
<td>If a sensitivity analysis was performed to account for missing data (multiple imputation, inverse probability weighting) and the results are similar to the main analysis, or the results are different but the interpretation is done on the sensitivity analysis and not on the main analysis.</td>
</tr>
<tr>
<td>Risk of bias judgment</td>
<td>Low: (i) Data were reasonably complete; (95% or 90% with demonstrations that they are similar or an analysis was done for missing data) or (ii) Proportions of and reasons for missing participants were similar across intervention groups; or (iii) The analysis addressed missing data and is likely to have removed any risk of bias. Moderate (between 94 (or 89) and 80% at follow-up, can go down to 75% if a comparison shows that they are similar): (i) Proportions of and reasons for missing participants differ slightly across intervention groups; and (ii) The analysis is unlikely to have removed the risk of bias arising from the missing data. Serious (between 79% (or 74%) and 50% at follow-up with comparison): (i) Proportions of missing participants differ substantially across interventions; or Reasons for missing differ substantially across interventions; and (ii) The analysis is unlikely to have removed the risk of bias arising from the missing data; or Missing data were addressed inappropriately in the analysis; or The nature of the missing data means that the risk of bias cannot be removed through appropriate analysis. Critical (&lt;50%): (i) (Unusual) There were critical differences between interventions in participants with missing data; and (ii) Missing data were not, or could not, be addressed through appropriate analysis.</td>
<td>Low / Moderate / Serious / Critical / NI</td>
</tr>
</tbody>
</table>
| 6.1 Could the outcome measure have been influenced by knowledge of the intervention received? | NO: Obtained objectively by register  
PN: some of the motives for absences are obtained by the interview of participants  
YES: impossible in our case due to inclusion criteria’s and the definition of the chosen issue. | Y / PY / PN / N / NI |
|---|---|---|
| 6.2 Were outcome assessors aware of the intervention received by study participants? | NO: If the people responsible for collecting data in the register do not know the status of the exhibition  
YES: very unlikely, only if the persons responsible for collecting data in the registers know the status of the exhibition | Y / PY / PN / N / NI |
| 6.3 Were the methods of outcome assessment comparable across intervention groups? | Always YES, unless the method is different between exposed and unexposed, which would be highly unlikely | Y / PY / PN / N / NI |
| 6.4 Were any systematic errors in measurement of the outcome related to intervention received? | Always NO: if there are errors in the outcome measure they will not be related to the exposure | Y / PY / PN / N / NI |
| Risk of bias judgment | Low: (i) The methods of outcome assessment were comparable across intervention groups;  
                         and  
                         (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants;  
                         and  
                         (iii) Any error in measuring the outcome is unrelated to intervention status.  
                         Moderate: (i) The methods of outcome assessment were comparable across intervention groups;  
                         and  
                         (ii) The outcome measure is only minimally influenced by knowledge of the intervention received by study participants;  
                         and  
                         (iii) Any error in measuring the outcome is only minimally related to intervention status.  
                         Serious: NEVER  
                         (i) The methods of outcome assessment were not comparable across intervention groups;  
                         or  
                         (ii) The outcome measure was subjective (i.e. vulnerable to influence by knowledge of the intervention received by study participants);  
                         and  
                         The outcome was assessed by assessors aware of the intervention received by study participants;  
                         or  
                         (iii) Error in measuring the outcome was related to intervention status.  
                         Critical: Never | Low / Moderate / Serious / Critical / NI |

**Bias in selection of the reported result:**  
**Note:** This criterion is difficult to apply in our case, because no (or very few) studies have a published protocol and we never have access to the analysis plan. Thus, would always be at moderate risk, therefore will not be evaluated systematically in included studies
<table>
<thead>
<tr>
<th>Overall - SUMMARY</th>
<th>Low / Moderate / Serious / Critical / NI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias due to confounding</td>
<td></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Low / Moderate / Serious / Critical / NI</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low / Moderate / Serious / Critical / NI</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low / Moderate / Serious / Critical / NI</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low / Moderate / Serious / Critical / NI</td>
</tr>
<tr>
<td>Overall</td>
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</tbody>
</table>

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### Roelen 2018

<table>
<thead>
<tr>
<th>Type of bias</th>
<th>Classification</th>
<th>Reason - explanation</th>
</tr>
</thead>
</table>
| Bias due to confounding               | Moderate       | (i) Confounding expected, all known important confounding domains appropriately measured and controlled for; and (ii) Reliability and validity of measurement of important domains were sufficient, such that we do not expect serious residual confounding.  
Adjusted for age, sex, marital status, care for children and work related variables (type of nursing work, years as a nurse, work hours/week) obtained from a register |
| Bias in selection of participants into the study | Critical       | (ii) A substantial amount of follow-up time is likely to be missing from analyses: Participation at baseline was 38% without comparison between participants and non-participants |
| Bias in classification of interventions | Moderate       | (i) Intervention status is well defined: Validated questionnaire, but no reference provided for the validation of the translation and (ii) Some aspects of the assignments of intervention status were determined retrospectively.  
The authors do not mention if the prevalent cases were excluded at baseline. |
| Bias due to missing data              | Serious        | (i) Proportions of missing participants differ substantially across interventions; or Reasons for missing differ substantially across interventions; and (ii) The analysis is unlikely to have removed the risk of bias arising from the missing data; or Missing data were addressed inappropriately in the analysis;  
74% of baseline participants were included in the analyses and authors provide comparison between included and excluded participants showing that lost to follow-up are similar in terms of exposure, SES, age and sex. No imputation was done. |
| Bias in measurement of outcomes      | Low            | (i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status.  
Information obtained by registers, without knowledge of exposure. |

<p>| Overall                               | Critical       |                                                                                                                                                                                                                  |</p>
<table>
<thead>
<tr>
<th>Type of bias</th>
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<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Critical</td>
<td>(i) Confounding inherently not controllable: Confounding not evaluated, only crude results presented</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>No information</td>
<td>Participation at baseline not mentioned</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined; and (ii) Intervention definition is based solely on information collected at the time of intervention. Exposure was measured with a validated tool and prevalent cases were excluded at baseline</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>No information</td>
<td>Percent of missing data not mentioned</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Moderate</td>
<td>(ii) The outcome measure is only minimally influenced by knowledge of the intervention received by study participants: We do not have the confirmation that absence data came from a register and thus were objectively assessed, but the diagnoses were given by a physician.</td>
</tr>
<tr>
<td>Overall</td>
<td>Critical</td>
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<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for; and (ii) Reliability and validity of measurement of important domains were sufficient, such that we do not expect serious residual confounding. Adjusted for age, sex, and education and other work characteristics in a second model</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>ii) A potentially important amount of follow-up time is missing from analyses: Participation of 82% at baseline, without comparison with non-participants</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined; and (ii) Intervention definition is based solely on information collected at the time of intervention. Exposure was measured with a validated tool and participants on sick leave were excluded at baseline and an adjustment was made for mental health at baseline</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Serious</td>
<td>i) Proportions of missing participants differ substantially across interventions: 69% of the baseline participants were included in the analyses, Reasons for missing differ substantially across interventions: excluded workers were younger, more often male, had shorter employment duration, shorter job tenure, and reported more favorable psychosocial work characteristics than included workers</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for: <strong>Models are adjusted for age, gender and education (SES) but also include smoking, BMI, sedentary behavior and alcohol intake, which could be considered mediators.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>ii) A potentially important amount of follow-up time is missing from analyses: <strong>Participation of 81% at baseline, without comparison with non-participants</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined; and (ii) Intervention definition is based solely on information collected at the time of intervention. <strong>Exposure was measured with a validated tool and prevalent cases were excluded at baseline</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low</td>
<td>(i) Data were reasonably complete: <strong>Data were at least 95% complete.</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for: Models are adjusted for age, sex and job position (SES) but include WAI score (subjective estimation of work ability, number of diagnosed diseases, subjective estimation for work impairment due to diseases, sickness absences during the past year, mental resources), which could partly be considered as a mediator.</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>(i) Selection into the study may have been related to intervention and outcome; and the proportion of participants for which this was the case was too low to induce important bias: Participation at baseline: 94%</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(ii) Some aspects of the assignments of intervention status were determined retrospectively: Prevalent cases not clearly excluded, but adjusted for in the analysis</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups; 84% of baseline participants were included in the analyses and authors do not provide comparison between included and excluded participants</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
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<tr>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Bias due to confounding                     | Moderate       | (i) Confounding expected, all known important confounding domains appropriately measured and controlled for;  
(ii) Reliability and validity of measurement of important domains were sufficient, such that we do not expect serious residual confounding. 
Adjusted for age, sex, location of workplace, occupational status, education and size of residence |
| Bias in selection of participants into the study | Serious       | (ii) A substantial amount of follow-up time is likely to be missing from analyses: Participation at baseline was 68% without comparison between participants and non-participants |
| Bias in classification of interventions     | Moderate       | (i) Intervention status is well defined: Validated questionnaire, but no reference provided for the validation of the translation                                                                                     |
| Bias due to missing data                    | Serious        | (i) Proportions of missing participants differ substantially across interventions: 70% of the baseline participants included in the analysis, without comparison with the excluded |
| Bias in measurement of outcomes             | Low            | (i) The methods of outcome assessment were comparable across intervention groups;  
(ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants;  
(iii) Any error in measuring the outcome is unrelated to intervention status. 
Information obtained by registers, without knowledge of exposure. |
<p>| Overall                                     | Serious        |                                                                                                                                                                                                                 |</p>
<table>
<thead>
<tr>
<th>Type of bias</th>
<th>Classification</th>
<th>Reason - explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for; <strong>Models are adjusted for age, gender and education (SES) but also include self-rated health, which could be considered a mediator.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <strong>Participation rate is 60% and no comparison is provided by authors between eligible population and participants.</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined; <strong>and</strong> (ii) Intervention definition is based solely on information collected at the time of intervention. Exposure was measured with a validated translation of Karasek’s scale, participants on sick leave or on disability pension were excluded at baseline, and an adjustment was made for sick leave in the 2 years prior to baseline.</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Serious</td>
<td>(i) Proportions of missing participants differ substantially across interventions: <strong>64% of baseline participants included in the analyses</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; <strong>and</strong> (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; <strong>and</strong> (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for; <em>Backward type analysis for age, gender and education in addition to other factors</em>. The final model includes age, gender and alcohol consumption, the latter is considered a potentially intermediate factor.</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Critical</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <em>Participation at baseline was 30%. An analysis of non-respondents revealed no significant differences in age and sex. However, more lower grade employees were non-respondents according to the reference cited in the article. This supposes a possible selection bias</em></td>
</tr>
</tbody>
</table>
| Bias in classification of interventions | Moderate       | (i) Intervention status is well defined: *Exposure were based on Karasek’s and Siegrist’s models, validation found in the 2009 Clumeck study (Belstress I) (Moreau 2004).*  
(ii) Intervention definition is based solely on information collected at the time of intervention: *Prevalent cases were not excluded. Analyses were adjusted for baseline depressive symptoms, which partially controls for this bias.* |
| Bias due to missing data          | Moderate       | (i) Proportions of and reasons for missing participants differ slightly across intervention groups; *88% of baseline participants were included in the analyses and authors provided comparison between included and excluded participants showing that loss to follow-up was similar in terms of exposure as well as self-reported absence at baseline.* |
| Bias in measurement of outcomes   | Low            | (i) The methods of outcome assessment were comparable across intervention groups; *and*  
(ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; *and*  
(iii) Any error in measuring the outcome is unrelated to intervention status. *Information obtained by registers, without knowledge of exposure.* |
<p>| Overall                           | Critical       | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Serious for both level</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for; Both exposure measures (work unit level and individual level) are considered problematic. Models with the ERI measure include potential intermediate variables, while separate components of the scale was not adjusted for SES.</td>
</tr>
<tr>
<td>Bias in selection of</td>
<td>Individual level:</td>
<td>Individual level: (ii) A substantial amount of follow-up time is likely to be missing from analyses: Participation of 68% without comparison with nonparticipants. Work-unit level: (i) Selection into the study may have been related to intervention and outcome; and the proportion of participants for which this was the case was too low to induce important bias: Participation of 100%</td>
</tr>
<tr>
<td>participants into the study</td>
<td>Serious</td>
<td></td>
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<tr>
<td></td>
<td>Work-unit level:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Bias in classification of</td>
<td>Serious for both level</td>
<td>(i) Intervention status is not well defined; Not a validated proxy of the ERI questionnaire. Prevalent cases were not excluded, but long sick leaves (&gt;90 days) were excluded and analyses were adjusted for baseline mental health.</td>
</tr>
<tr>
<td>interventions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Individual level:</td>
<td>Individual level: (i) Proportions of missing participants differ substantially across interventions: 58% of baseline participants included in the analyses. Work-unit level: (i) Proportions of and reasons for missing participants differ slightly across intervention groups: 86% of baseline participants included in the analyses</td>
</tr>
<tr>
<td></td>
<td>Serious</td>
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<td></td>
<td>Work-unit level:</td>
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<tr>
<td></td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Bias in measurement of</td>
<td>Low for both level</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
<tr>
<td>outcomes</td>
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<tr>
<td>Overall</td>
<td>Individual level:</td>
<td>Serious</td>
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<td></td>
<td>Work-unit level:</td>
<td>Serious</td>
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<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <strong>Adjusted for age, sex and education.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>(ii) A potentially important amount of follow-up time is missing from analyses: <strong>Participation of 81% at baseline, without comparison with non-participants</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined: <strong>Exposure is defined with a validated French version of the ERI questionnaire. and</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) Intervention definition is based solely on information collected at the time of intervention: <strong>Prevalent cases were excluded from the analyses</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups; <strong>81% of baseline participant included in the analyses, without comparison with excluded participants</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; <strong>and</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; <strong>and</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
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<td>Overall</td>
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<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <em>Authors provide a model with appropriate measures and control for age, sex and SES (occupation) without potentially intermediate variables.</em></td>
</tr>
<tr>
<td>Bias in selection of participants</td>
<td>Serious</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <em>Participation of 68% at baseline, without comparison with non-participants</em></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(i) Intervention status is well defined: <em>Validated tool but without validation of the translation, prevalent cases excluded.</em></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Serious</td>
<td>(i) Proportions of missing participants differ substantially across interventions; or Reasons for missingness differ substantially across interventions: <em>55% of baseline participants included in the analyses, without comparison with excluded participants</em></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. <em>Information obtained by registers, without knowledge of exposure.</em></td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <strong>All important domains (age, gender and SES) are controlled for.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>(i) Selection into the study may have been related to intervention and outcome; and the proportion of participants for which this was the case was too low to induce important bias Participation of 100% at baseline</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Serious</td>
<td>(i) Intervention status is not well defined: <strong>Exposure was assessed from a Matrix based on scores derived from another population, introducing misclassification.</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low</td>
<td>(i) Data were reasonably complete: <strong>Data were 99% complete. 1% of data were missing on outcome.</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <strong>Fully adjusted models control for age (as time scale), sex and occupation (SES).</strong></td>
</tr>
<tr>
<td>Bias in selection of participants</td>
<td>Serious</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <strong>Participation of 67% at baseline, eligible population is different than participants. A larger portion of non-participants are younger employees, men, and more prone to sick leave.</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(i) Intervention status is well defined: <strong>Validated tool but without validation of the translation, prevalent cases were excluded.</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Serious</td>
<td>(i) Proportions of missing participants differ substantially across interventions; or Reasons for missingness differ substantially across interventions: <strong>Follow-up of 74%, with comparison that show slight differences but with no indication of bias. Missing data partially imputed</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
</tr>
<tr>
<td>Overall</td>
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<td></td>
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<tr>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate for both levels</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <strong>Models are adjusted for age, gender and SES</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Individual level: Serious, Work Level: Moderate</td>
<td>Individual level: (ii) A substantial amount of follow-up time is likely to be missing from analyses: Participation of 68% with comparison that showed differences between participants and non-participants. Work Level: (i) Selection into the study may have been related to intervention and outcome; and the proportion of participants for which this was the case was too low to induce important bias: Participation of 100%</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Serious for both levels</td>
<td>(i) Intervention status is not well defined: <strong>Proxy of validated questionnaire without validation provided and use of exposure matrix</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low for both levels</td>
<td>(i) Data were reasonably complete: 98% of baseline participants for matrix exposure and 94% of baseline participants for individual exposure were included in the analyses, with sensibility analyses that show no difference in the association reported between included and excluded participants.</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low for both levels</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
</tr>
<tr>
<td>Overall</td>
<td>Individual level: Serious, Work level: Serious</td>
<td></td>
</tr>
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<td>Type of bias</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for: Population included only male and appropriate adjustment provided for age and education (SES), but adjusted models included chronic physical condition, which can be considered as a potential mediator and may introduce residual confounding.</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>A potentially important amount of follow-up time is missing from analyses: Participation of 85% without comparison between participants and non-participants.</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined: Exposure was measured with a Japanese version of the NIOSH-GJSQ with validation provided. and (ii) Intervention definition is based solely on information collected at the time of intervention: Exclusion of prevalent cases and analyses are adjusted for depression at baseline</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups: 81% of baseline participants included in the analyses with comparison that showed differences between included and excluded participants.</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
</tbody>
</table>

| Overall                                  | Serious        |                                                                                           |

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### Kivimaki 2010

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<thead>
<tr>
<th>Type of bias</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: <em>Adjustment for gender and SES inherent to the study design (population included only female nurses) and model adjusted for age.</em></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td>A potentially important amount of follow-up time is missing from analyses: <em>Participation rate is 78%. No comparison of participant and eligible population is provided by authors</em></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Serious</td>
<td>(i) Intervention status is not well defined: <em>Exposure was measured with the short version of the psychological demands scale from Karasek’s questionnaire, but no validated reference was provided</em></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low</td>
<td>(i) Data were reasonably complete: <em>95% at follow-up</em></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; <em>and</em> (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; <em>and</em> (iii) Any error in measuring the outcome is unrelated to intervention status. <em>Information obtained by registers, without knowledge of exposure.</em></td>
</tr>
</tbody>
</table>

**Overall**

<p>| Serious |</p>
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</thead>
<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for; <strong>Models are adjusted for age, living situations and occupation and are stratified by gender. Age was dichotomized at the median, resulting in potentially important residual confounding.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Critical</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <strong>Participation at baseline was 48% and no information is provided on refusals</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(i) Intervention status is well defined: <strong>JCQ version validated with supporting reference. and</strong> (ii) Some aspects of the assignments of intervention status were determined retrospectively: <strong>Prevalent cases were not excluded from analyses. Adjustment for mental health at baseline was performed with the CESD scale.</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups: <strong>Data were complete for 90% of the sample. Authors performed imputation to reduce missing data on exposure, but their analyses are unlikely to have removed all bias from other missing data. Little information is provided on missing data for covariates and no comparison is provided.</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; <strong>and</strong> (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; <strong>and</strong> (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
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<td>Overall</td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Critical</td>
<td>(i) Confounding inherently not controllable: <strong>Confounding not evaluated, only crude results presented</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td>(ii) A substantial amount of follow-up time is likely to be missing from analyses: <strong>Participation of 65% with comparison that shows differences between participants and non-participants</strong></td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Low</td>
<td>(i) Intervention status is well defined: <strong>This is a validation study, and</strong> (ii) Intervention definition is based solely on information collected at the time of intervention: <strong>Prevalent cases were excluded.</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups: <strong>Data are 85% complete after partial imputation</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; <strong>and</strong> (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; <strong>and</strong> (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
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</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: Population is composed of 94% women and all are nurses. SES is therefore controlled for by the study design. It is unlikely that gender introduces important confounding. Models are adjusted for age.</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>A potentially important amount of follow-up time is missing from analyses: Participation rate at baseline was 70%, with a comparison showing that non-participants and participants are similar for work shift but not for job status, full time have a greater % of participation than part-time.</td>
</tr>
</tbody>
</table>
| Bias in classification of interventions | Moderate       | (i) Intervention status is well defined; Exposure was measured with the validated French version of Karasek’s questionnaire as well as Siegrist’s original questionnaire for reward component. and  
(ii) Some aspects of the assignments of intervention status were determined retrospectively. Prevalent cases were not excluded, but analyses partially adjust for prior mental health problems by controlling for previous all-cause work absence. |
| Bias due to missing data              | Serious        | (i) Proportions of missing participants differ substantially across interventions; Participation at follow-up was 66% Reasons for missing differ substantially across interventions: Authors provide a comparison between participants with complete data and participants with missing data that were excluded. The comparison shows that they are relatively similar in terms of job status exposure, job change, and psychological distress. Differences were noted in terms of age and seniority. |
| Bias in measurement of outcomes      | Low            | (i) The methods of outcome assessment were comparable across intervention groups; and  
(ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and  
(iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure. |
<p>| Overall                               | Serious        | © 2020 American Medical Association. All rights reserved.                                                                                                   |</p>
<table>
<thead>
<tr>
<th>Type of bias</th>
<th>Classification</th>
<th>Reason - explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: Adjusted analyses for the three important factors (age, sex and education as a proxy of SES) were appropriate and included in a model without potential intermediate factors. Data obtained by register.</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Moderate</td>
<td>Selection into the study may have been related to intervention and outcome; and the proportion of participants for which this was the case was too low to induce important bias: Participation rate is 100% due to the use of a national register</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Serious</td>
<td>(i) Intervention status is not well defined; Unclear validation of the measure to assess exposure or the job-exposure matrix. (ii) Major aspects of the assignments of intervention status were determined in a way that could have been affected by knowledge of the outcome. Prevalent cases were not excluded from analysis.</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low</td>
<td>(i) Data were reasonably complete: Data obtained by register were complete. 100%.</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(i) At least one known important domain was not appropriately measured, or not controlled for: <strong>Age was assessed but not included in the model. Models presented are crude, although there is some degree of control for SES and gender due to the study design.</strong></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td><strong>A potentially important amount of follow-up time is missing from analysis:</strong> Participation at baseline was 62%. Subjects who refused to participate differed from participants in terms of seniority, of employment status and types of work schedule. Also, a sensitivity analysis with hospitals with a better participation rate did not show any difference.</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(i) Intervention status is well defined: <strong>Exposure measured with a validated French version of Karasek’s questionnaire.</strong> and (ii) Some aspects of the assignments of intervention status were determined retrospectively: <strong>Prevalent cases were not excluded and no sensitivity analyses were performed</strong></td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Low</td>
<td>(i) Data were reasonably complete: <strong>95% of baseline participants included in the analyses</strong></td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. <strong>Information obtained by registers, without knowledge of exposure.</strong></td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bias due to confounding</td>
<td>Moderate</td>
<td>(i) Confounding expected, all known important confounding domains appropriately measured and controlled for: Adjusted for age, gender and occupational grade (SES)</td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td>A potentially important amount of follow-up time is missing from analyse: Participation at baseline of 73% without comparison with non-participants</td>
</tr>
<tr>
<td>Bias in classification of interventions</td>
<td>Moderate</td>
<td>(i) Intervention status is well defined: partial validation of the tool used, and (ii) Some aspects of the assignments of intervention status were determined retrospectively: Prevalent were cases not excluded</td>
</tr>
<tr>
<td>Bias due to missing data</td>
<td>Moderate</td>
<td>(i) Proportions of and reasons for missing participants differ slightly across intervention groups: 86% of baseline participants included in the analyses</td>
</tr>
<tr>
<td>Bias in measurement of outcomes</td>
<td>Low</td>
<td>(i) The methods of outcome assessment were comparable across intervention groups; and (ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and (iii) Any error in measuring the outcome is unrelated to intervention status. Information obtained by registers, without knowledge of exposure.</td>
</tr>
<tr>
<td>Overall</td>
<td>Serious</td>
<td></td>
</tr>
<tr>
<td>Type of bias</td>
<td>Classification</td>
<td>Reason - explanation</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bias due to confounding</td>
<td>Serious</td>
<td>(ii) Reliability or validity of measurement of an important domain was low enough that we expect serious residual confounding: <em>Authors used the forward technique to control for potential confounding. Important domains of confounding were tested one at a time by stratification. This may lead to potential residual confounding.</em></td>
</tr>
<tr>
<td>Bias in selection of participants into the study</td>
<td>Serious</td>
<td>A potentially important amount of follow-up time is missing from analyse: <em>Participation of 65% at baseline, comparison showed that participants and non-participants were not significantly different by age or sex.</em></td>
</tr>
</tbody>
</table>
| Bias in classification of interventions              | Moderate       | (i) Intervention status is well defined: *Authors provided references to support the validation of the French version of the questionnaire.* and  
(ii) Some aspects of the assignments of intervention status were determined retrospectively: *Prevalent cases were not excluded in the main analyses or in the secondary analyses.* |
| Bias due to missing data                              | Serious        | (i) Proportions of missing participants differ substantially across interventions; or Reasons for missing differ substantially across interventions: *74% of baseline participants included in the analyses, with comparison that show no differences between participants and refusals* |
| Bias in measurement of outcomes                      | Low            | (i) The methods of outcome assessment were comparable across intervention groups; and  
(ii) The outcome measure was unlikely to be influenced by knowledge of the intervention received by study participants (i.e. is objective) or the outcome assessors were unaware of the intervention received by study participants; and  
(iii) Any error in measuring the outcome is unrelated to intervention status. *Information obtained by registers, without knowledge of exposure.* |
| Overall                                               | Serious        |                                                                                                                                                    |
### Table 2. Results of the Sensitivity Analyses

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Exposure</th>
<th>Studies included</th>
<th>N, Meta-estimates, heterogeneity ($I^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Abundance</td>
</tr>
<tr>
<td>Same as main analyses but stratified for absence or disability pension</td>
<td>Job strain</td>
<td>Same as main analyses</td>
<td>n=7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.15 [0.65, 2.01]</td>
</tr>
<tr>
<td></td>
<td>High psychological demands</td>
<td>Same as main analyses</td>
<td>n=5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.17 [0.96, 1.43]</td>
</tr>
<tr>
<td></td>
<td>Low job control</td>
<td>Same as main analyses</td>
<td>n=4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.67 [1.12, 2.49]</td>
</tr>
<tr>
<td></td>
<td>Low social support at work</td>
<td>Same as main analyses</td>
<td>n=8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.67 [1.12, 2.49]</td>
</tr>
<tr>
<td></td>
<td>Effort-reward imbalance</td>
<td>Same as main analyses</td>
<td>n=2</td>
</tr>
<tr>
<td></td>
<td>Low reward</td>
<td>Same as main analyses</td>
<td>n=5</td>
</tr>
<tr>
<td>Including studies that evaluated aggregated level of exposure</td>
<td>Job strain</td>
<td>Same as main analysis + Samuelsson (2013)</td>
<td>n=7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.31 [1.04, 1.66]</td>
</tr>
<tr>
<td></td>
<td>High psychological demands</td>
<td>Same as main analysis + Samuelsson (2013) and Boedeker (2001)</td>
<td>n=6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.03 [0.74, 1.43]</td>
</tr>
<tr>
<td></td>
<td>Low job control</td>
<td>Same as main analysis + Samuelsson (2013) and Boedeker (2001)</td>
<td>n=5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1.29 [0.86, 1.92]</td>
</tr>
<tr>
<td></td>
<td>Low social support at work</td>
<td>Same as main analysis + Samuelsson (2013)</td>
<td>n=8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.89 [0.81, 0.98]</td>
</tr>
<tr>
<td>Analysis</td>
<td>Exposure</td>
<td>Studies included</td>
<td>Absence</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Including only studies using hazard ratios</td>
<td>Job strain</td>
<td>Bourbonnais 2005, Inoue, Ndjaboue 2017, Mantyniemi</td>
<td>n=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>n=1</td>
</tr>
<tr>
<td>Including studies using quadrant categorization</td>
<td>Job strain</td>
<td>Bourbonnais (1995, 2001 and 2005), Mather, Ndjaboue 2017</td>
<td>n=5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Without studies on effort or without other tools than JCQ</td>
<td>High psychological demands</td>
<td>Same as main analysis, without Ndjaboue 2014, Juvali 2014, and Van Hoffen</td>
<td>n=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>n=1</td>
</tr>
<tr>
<td>With results on co-workers’ support instead of supervisors’ (Inoue, van Hoffen)</td>
<td>Low social support at work</td>
<td>Same as main analysis</td>
<td>n=8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>n=1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=1</td>
</tr>
<tr>
<td></td>
<td>High psychological demands</td>
<td>Same as main analysis +: Roelen 2018, Vendrig 2018, Janssens 2014, Clumeck 2009</td>
<td>N=9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=2</td>
</tr>
<tr>
<td></td>
<td>Low job control</td>
<td>Same as main analysis + Vendrig 2018, Janssens 2014, Clumeck 2009</td>
<td>N=7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=1</td>
</tr>
<tr>
<td></td>
<td>Low social support at work</td>
<td>Same as main analysis + Roelen 2018, Vendrig 2018, Janssens 2014, Clumeck 2009</td>
<td>N=12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=1</td>
</tr>
<tr>
<td></td>
<td>Effort-reward imbalance</td>
<td>Same as main analysis + Janssens 2014</td>
<td>N=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=1</td>
</tr>
<tr>
<td></td>
<td>Low reward</td>
<td>Same as main analysis + Janssens 2014</td>
<td>N=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=1</td>
</tr>
<tr>
<td>Analysis</td>
<td>Exposure</td>
<td>Studies included</td>
<td>N, Meta-estimates, heterogeneity ($I^2$)</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Abundance</td>
</tr>
<tr>
<td>Excluding studies that did not clearly state that prevalent cases were excluded</td>
<td>Job strain</td>
<td>Without Bourbonnais 1995, 2001 and 2005, and Otha 2017</td>
<td>N=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I² = 70%</td>
</tr>
<tr>
<td></td>
<td>High psychological demands</td>
<td>Without Bourbonnais 2005</td>
<td>N=4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I² = 59%</td>
</tr>
<tr>
<td></td>
<td>Low job control</td>
<td>Without Bourbonnais 2005</td>
<td>N=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I² = 75%</td>
</tr>
<tr>
<td></td>
<td>Low social support at work</td>
<td>Without Bourbonnais 1995, 2001 and 2005, Otha 2017, and Stansfeld 1997</td>
<td>N=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I² = 0%</td>
</tr>
<tr>
<td></td>
<td>Effort-reward imbalance</td>
<td>Without Bourbonnais 2005</td>
<td>NA, N=1</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Low reward</td>
<td>Without Bourbonnais 2005</td>
<td>NA, N=1</td>
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</tbody>
</table>
Figure 2. Funnel Plot of Studies on the Effect of A) Job Strain, B) High Psychological Demands and C) Low Social Support at Work on the Risk of Sickness Absence Due to a Diagnosed Mental Disorder

A)

B)

C)


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