Table 11.1 Studies of high or moderate quality used for results and conclusions in the present report – symptoms of depression.

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Ahola et al 2007 [85] Finland **Study quality** High	Prospective cohort study 3 years Dental care 2003–2006	Participants were members of the Finnish dentist Association. Study aimed at investigating members employed in clinical work n=2 555 at follow-up (3 255 at baseline) 1 883 women and 672 men at baseline	**Job strain** Job strain was assessed by a self-questionnaire; the Job Content Questionnaire by Karasek	**Depression** Outcome was assessed by a self-questionnaire Depression was assessed by the Beck Depression Inventory (BDI)	Prospective association of job strain at baseline for new cases of depression at 3-year follow-up. Adjusted for gender, age, and marital status at baseline. OR (95% CI) **Mixed group** Job strain and depression: 3.39 (2.03; 5.66)	Prospective association of job strain at baseline for new cases of depression at 3-year follow-up. Adjusted for gender, age, marital status at baseline and for burnout and depression respectively at baseline. OR (95% CI) **Mixed group** Job strain and depression: 1.30 (0.73; 2.30)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Andrea et al 2009 [63] The Netherlands	Prospective cohort. Part of the Maastricht Cohort Study of Fatigue 2 years	Participants were employees at Dutch companies and organizations. Only participants in work year 2000 were included. Participants reporting psychological distress (GHQ ≥4) in year 2000 not excluded. Mean age 45–46 years depending on group Study population n=3 707 (Sub)Clinical depression scores could be calculated for 3 613 persons (910 women and 2 703 men)	**Psychosocial work characteristics** Psychosocial work characteristics were assessed by self-administered questionnaires The Job Content Questionnaire was used for psychological job demands, decision latitude and social support Emotional demands (eg being confronted with personally upsetting things), conflict with supervisor, conflict with co-worker and job insecurity were measured with items from the VBBA questionnaire by Van Veldhoven et al and by questions developed by the authors	**Depression** Depression was assessed by self-administered questionnaires using seven items from the self-report HAD Scale (HAD-D subscale), which assesses the presence and severity of depression during the past 7 days. Employees scoring 11 points or more in 2002 were classified as (sub)clinically depressed There were 121 participants (92 males and 29 females) with a (sub)clinical level of depression at follow-up	(Sub)Clinical depression at follow-up (23 months later) by psychosocial work characteristics. Crude OR (95% CI) **Psychological job demands (low=1)** High: 2.40 (1.42; 4.04), p<0.01 Medium: 1.75 (1.04; 2.92), p<0.05 **Decision latitude (high=1)** Low: 2.02 (1.27; 3.20), p<0.01 Medium: 0.93 (0.57; 1.54) **Social support (high=1)** Low: 1.91 (1.30; 2.79), p<0.001 **Emotional demands (no=1)** Yes: 1.81 (1.23; 2.66), p<0.01 **Conflict with supervisor (no=1)** Yes: 1.51 (0.65; 3.51), p<0.01 **Conflict with co-worker (no=1)** Yes: 2.16 (1.19; 3.91), p<0.05 **Job insecurity (no=1)** Yes: 2.46 (1.63; 3.73), p<0.001 **Fulltime work (yes=1)** No: 0.75 (0.50; 1.13)	(Sub)Clinical depression at follow-up (23 months later) by psychosocial work characteristics. OR (95% CI) adjusted for gender, age educational level, living alone, smoking, the presence of (psycho)somatic condition, shocking events outside work and for all other predictors **Psychological job demands (low=1)** High: 2.26 (1.28; 4.01), p<0.01 Medium: 1.87 (1.09; 3.22), p<0.05 **Decision latitude (high=1)** Low: 1.43 (0.83; 2.47) Medium: 0.88 (0.52; 1.52) **Social support (high=1)** Low: 1.27 (0.82; 1.98) **Emotional demands (no=1)** Yes: 1.29 (0.83; 2.00) **Conflict with supervisor (no=1)** Yes: 1.96 (0.39; 2.39) **Conflict with co-worker (no=1)** Yes: 1.23 (0.61; 2.49) **Job insecurity (no=1)** Yes: 1.98 (1.25; 3.13), p<0.01 **Fulltime work (yes=1)** No: 0.9 (0.58; 1.59)
Study quality Moderate	Working population 2000–2002					

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Beseler et al 2008 [139] USA **Study quality Comments** Moderate *Note:* Data is also provided on OP (malathion etc), carbamates, organo-clorines and fumigants, but this is not listed in the present table	Case-control Year of information collection not specified. Participants were recruited 1993–1997 Agriculture	Participants were farmers enrolled in the Agricultural Health Study (AHS). In this study, participants were private applicators, who were primarily farmers. Commercial pesticide applicators were excluded, since they have a different pattern of exposure compared to farmer applicators Individuals reporting feeling depressed, indifferent or withdrawn during the last year (but not diagnosed with depression) were excluded n=534 cases and 17 051 controls All participants were men	**Exposure to several chemical substances** Exposure was assessed by self-questionnaire. It contained detailed information on lifetime use of 50 pesticides, and information on solvent and heavy metal exposure	**Depression** Depression was assessed by self-questionnaire, where the participants answered a question on if they had had a physician-diagnosed depression Cases were defined as farmers who stated that they had been diagnosed with depression that required medication or "shock therapy" Further questions regarding diagnosis were asked to those who answered "yes" Controls were farmers not diagnosed for depression by the same method	Differences between cases and controls. OR (95% CI) **Exposure to** Solvents other than gasoline:1.37 (1.11; 1.69) Heavy metal: 1.27 (1.04, 1.56) **Days per year mixed/applied pesticides** <5: Reference 5–9: 1.21 (0.92; 1.58) 10–19: 1.08 (0.83; 1.40) 20–39: 1.06 (0.79; 1.43) >39: 1.42 (1.00; 2.02) **Years mixed/applied pesticides** <6: Reference 6–10: 1.61 (1.05; 2.46) 11–20: 1.95 (1.34; 2.84) 21–30: 2.33 (1.60; 3.40) >30: 2.38 (1.60; 3.55) **Lifetime days of pesticide exposure** 0–255: Reference 226–752: 1.16 (0.95; 1.41) >752: 1.28 (1.01; 1.63) **Diagnosed disease** Pesticide poisoning: 3.96 (2.76; 5.68) **Ever used substance** Herbicides: 2.07 (0.77; 5.57) Insecticides: 1.96 (1.23; 3.11) Fungicides: 1.10 (0.92; 1.32)	Multiple logistic regression analysis of cumulative exposure levels for the total sample. OR (95% CI) adjusted for covariates **Exposure to** Solvent: 1.26 (1.01; 1.59) **Lifetime days of pesticide exposure** 0–255: Reference 226–752: 1.07 (0.87; 1.31) >752: 1.11 (0.87; 1.42) **Diagnosed disease** Pesticide poisoning:2.57 (1.74; 3.79) **Ever used substance** Herbicides: 2.05 (0.76; 5.54) Insecticides: 2.05 (1.29; 3.27) Fungicides: 1.24 (1.01; 1.53)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Bonde et al 2009 [78] Denmark **Study quality** High	Prospective cohort study Public service workers Work climate investigated 2002–2006. Medication followed from 1995 to 2006	Participants were employees at a Danish county (mean age 43 years) and municipality (mean age 37 years) n=18 150 (21 129 at baseline) 14 243 women and 3 907 men	**Several psychosocial factors** Psychosocial factors were assessed by self-questionnaire developed by the authors (questions described in the article)	**Purchase of prescribed antidepressant drugs** Antidepressant prescriptions that were redeemed by the study cohort pharmacies were taken as a proxy for affective and stress-related disorders Prescriptions of the following drugs were included: tricyclic antidepressants, selective serotonin reuptake inhibitors, noradrenaline reuptake inhibitors and monoamine oxidase inhibitors	Purchase of prescribed antidepressants according to work climate. HR (95% CI) **Employees at a Danish county** *Overall work climate satisfaction (high=1)* Low: 0.92 (0.72; 1.17) Intermediate: 1.09 (0.88; 1.33) *Appropriate management (yes=1)* No: 0.80 (0.62; 1.02) Limited: 1.00 (0.82; 1.22) *Appropriate workload (yes=1)* No: 1.09 (0.88; 1.36) Somewhat: 0.83 (0.68; 1.01) *Appropriate skill discretion (yes=1)* No: 1.07 (0.85; 1.36) Somewhat: 1.12 (0.91; 1.37) *Appropriate decision authority (yes=1)* No: 1.10 (0.87; 1.40) Somewhat: 1.19 (0.97; 1.47) *Appropriate professionalism (yes=1)* No: 0.96 (0.76; 1.21) Somewhat: 0.98 (0.80; 1.19) *Appropriate cooperation (yes=1)* No: 0.87 (0.69; 1.11) Somewhat: 0.97 (0.79; 1.18) *Results continue on the next page*	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Continued Bonde et al 2009 [78] Denmark					**Employees at a Danish municipality** *High job demands (no=1)* Yes: 1.16 (0.84; 1.59) Somewhat: 1.27 (0.96; 1.67) *Low decision latitude (no=1)* Yes: 1.24 (0.92; 1.67) Somewhat: 0.95 (0.71; 1.23) *Low social support (no=1)* Yes: 1.50 (1.11; 2.03) Somewhat: 1.08 (0.81; 1.43) *High job strain and iso-strain (no=1)* Job strain: 1.19 (0.84; 1.68); Iso-strain: 1.17 (0.76; 1.80)	

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Burgard et al 2009 [114] USA **Study quality Comments** High *Note:* The study also presents data from the MIDUS respondents (n=1 216). Data from the MIDUS study are not presented here since the outcome measure is said to capture symptoms of poor mental health, rather than diagnosable depression	Prospective cohort. Part of the American Changing Lives (ACL) study 3 years General population 1986–1989	Participants were 25 years and older, living in the US in 1986, with oversampling of adults 60 years and older and of African Americans. Participants were working at baseline. Mean age 41 years n=1 507 at follow-up (1 867 at baseline) 866 women and 1 001 men at baseline	**Perceived job insecurity** Factor assessed by telephone interview and self-administered questionnaires using a question developed by the authors; "How likely is it that during the next couple of years you will involuntary lose your main job?"	**Depressive symptoms** Depressive symptoms were assessed by telephone interview and self-administered questionnaires using an 11-item version of the Center for Epidemiological Studies Depression Scale (CES-D). Responses denote the feelings the last week	Correlation between perceived job insecurity and self-rated depressive symptoms at follow-up. Unstandardized coefficients and standard errors (SE) from OLS regressions controlled for gender, age, race and employment status at follow-up **Insecure[1]** Baseline: 0.121 (0.032), p<0.01 Follow-up: 0.033 (0.034), p: ns Baseline and follow-up: 0.179 (0.048), p<0.001 [1] Baseline n=208, follow-up n=123, both baseline and follow-up n=85	Correlation between perceived job insecurity and self-rated depressive symptoms at follow-up. Unstandardized coefficients and standard errors (SE) from OLS regressions controlled for gender, age, race, employment status at follow-up, socio-demographic and job characteristics, prior health, hypertension, smoking status, neuroticism, objective employment insecurity both before baseline and over follow-up **Insecure[1]** Baseline: 0.032 (0.028), p: ns Follow-up: 0.010 (0.027), p: ns Baseline and follow-up: 0.117 (0.042), p<0.001 [1] Baseline n=208, follow-up n=123, both baseline and follow-up n=85

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Clays et al 2007 [64] Belgium **Study quality** Moderate	Prospective cohort. Part of the Belstress study Mean 6.6 years Working population, different professions 1995/98–2002/03	Participants were workers at nine workplaces where everybody aged 35–59 years were invited to participate 500 executives (18%), 1 291 white-collar (46%), 997 blue-collar workers (36%) n=2 821 871 women and 1 950 men 2 139 workers (571 women and 1 568 men) were free of high levels of depression symptoms at baseline	**Psychosocial work characteristics** Psychosocial work characteristics were assessed by self-administered questionnaires Job stress was assessed by Job Content Questionnaire by Karasek et al Isolated strain was defined as high job strain combined with low social support	**Depression symptoms** Symptoms of depression were assessed by self-administered questionnaire. A short 11-items form of the Center for Epidemiological Studies Depression Scale (CES-D) was used	Associations between baseline job stress and high level of depression symptoms at follow-up among workers free of high levels of depression symptoms at baseline. OR (95% CI) adjusted for age, educational level, social network, satisfaction with private life, locus of control, and the score for depression symptoms at baseline **Women** Job demands (low=1): 1.18 (0.72; 1.94) Decision latitude (high=1): 1.90 (1.08; 3.33) High job strain (no=1): 1.74 (1.00; 3.01) Social support (high=1): 1.35 (0.82; 2.23) Isolated strain (no=1): 2.53 (1.32; 4.86) **Men** Job demands (low=1): 1.31 (0.87; 1.99) Decision latitude (high=1): 1.07 (0.71; 1.62) High job strain (no=1): 1.58 (0.98; 2.54) Social support (high=1): 1.03 (0.69; 1.54) Isolated strain (no=1): 1.52 (0.86; 2.67)	Adjusted associations between repeated high job strain or isolated strain and depression symptoms at follow-up among the 2 139 workers free of high levels of depression symptoms at baseline. OR (95% CI). Model adjusted for age, educational level, social network, satisfaction with private life, locus of control, and the score for depression symptoms at baseline **Women** *Repeated high job strain (No–No=1)* Yes–No: 1.50 (0.73; 3.07) No–Yes: 2.14 (1.07; 4.31) Yes–Yes: 3.40 (1.45; 7.94) *Repeated isolated strain (No–No=1)* Yes–No: 3.16 (1.47; 6.78) No–Yes: 3.04 (1.35; 6.82) Yes–Yes: 2.12 (0.54; 8.31) **Men** *Repeated high job strain (No–No=1)* Yes–No: 1.25 (0.67; 2.34) No–Yes: 2.13 (1.16; 3.93) Yes–Yes: 3.31 (1.67; 6.56) *Repeated isolated strain (No–No=1)* Yes–No: 1.07 (0.52; 2.20) No–Yes: 3.14 (1.67; 5.90) Yes–Yes: 5.80 (2.12; 15.85)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Clumeck et al 2009 [65] Belgium **Study quality** Moderate	Prospective cohort. Part of the Belstress study The mean follow-up time was 3 years Working population, different professions 1994–1998	Participants were middle-aged men and women (35–59 years) employed in 24 large industries or administrations n=9 296 participants were examined Results based on 2 447 women and 6 103 men (Baseline data collection: 21 419 participants; 5 090 women and 16 329 men)	**Psychosocial work characteristics** Psychosocial work characteristics were assessed by self-administered questionnaires Job stress was assessed by Job Content Questionnaire by Karasek et al Job strain was examined in four categories of combinations between demand and control Iso-strain was examined in four categories of combinations between job strain and social support	**Depression** Symptoms of depression were assessed by self-administered questionnaire. A short 11-items form of the Center for Epidemiological Studies Depression Scale (CES-D) was used Tertiles of the CES-D total scores were used (total score <13, 13–16, ≥17), with the lowest category used as reference for regression analysis	Associations between demand-control and the demand-control support dimensions and spells of depression. OR (95% CI) adjusted for age and living situations **Women** *Strain (low strain=1)* Active: 1.02 (0.42; 2.42) Passive: 1.51(.68; 3.38) High strain: 1.95 (0.40; 4.27)* *Iso-strain* No high strain/high support: 1 No high strain/low support: 0.94 (0.50; 1.70) High strain/high support: 1.44 (0.77; 2.70) High strain/low support: 1.62 (0.92; 2.84) *Psychological demands (low=1)* Medium: 1.11 (0.65; 1.90) High: 1.96 (0.68; 2.12)* *Job control (high=1)* Medium: 0.90 (0.42; 1.96) Low: 2.05 (1.04; 4.03), p<0.01 *Social support (high=1)* Medium: 1.14 (0.62; 2.09) Low: 0.93 (0.51; 1.71) *Results continue on the next page*	Associations between demand-control and the demand-control support dimensions and spells of depression. OR (95% CI) adjusted for age, living situations, occupational group and CES-D at baseline **Women** *Strain (low strain=1)* Active: 0.91 (0.38; 2.22) Passive: 1.48 (0.65; 3.38) High strain: 1.77 (0.79; 3.95) *Iso-strain* No high strain/high support: 1 No high strain/low support: 0.83 (0.45; 1.54) High strain/high support: 1.27 (0.67; 2.42) High strain/low support: 1.44 (0.80; 2.58) *Psychological demands (low=1)* Medium: 1.03 (0.60; 1.77) High: 1.06 (0.60; 1.89) *Job control (high=1)* Medium: 1.02 (0.46; 2.26) Low: 2.21 (1.05; 4.68), p<0.01 *Social support (high=1)* Medium: 1.18 (0.64; 2.18) Low: 0.91 (0.49; 1.68) *Results continue on the next page*

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Continued Clumeck et al 2009 [65] Belgium					**Men** *Strain (low strain=1)* Active: 1.9 (0.8; 4.5) Passive: 3.6 (1.6; 8.3), p<0.01 High strain: 4.8 (2.01; 11.0), p<0.01 *Iso-strain* No high strain/high support: 1 No high strain/low support: 1.83 (1.07; 3.13), p<0.01 High strain/high support: 2.69 (1.35; 5.35), p<0.01 High strain/low support: 3.06 (1.71; 5.15), p<0.01 *Psychological demands (low=1)* Medium: 1.85 (1.09; 3.15) High: 1.39 (0.76; 2.53) *Job control (high=1)* Medium: 2.13 (1.11; 4.10), p<0.01 Low: 3.38 (1.79; 6.37), p<0.01 *Social support (high=1)* Medium: 0.57 (0.30; 1.08) Low: 1.07 (0.61; 1.85) * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	**Men** *Strain (low strain=1)* Active: 1.72 (0.72; 4.12) Passive: 2.67 (1.15; 6.19), p ≤0.05 High strain: 3.23 (1.40; 7.43), p ≤0.05 *Iso-strain* No high strain/high support: 1 No high strain/low support: 1.39 (0.81; 2.40) High strain/high support: 2.08 (1.04; 4.16) High strain/low support: 1.94 (1.06; 3.54) *Psychological demands (low=1)* Medium: 1.73 (1.01; 2.96) High: 1.23 (0.66; 2.27) *Job control (high=1)* Medium: 1.77 (0.92; 3.44) Low: 2.43 (1.27; 4.66) *Social support (high=1)* Medium: 0.56 (0.29; 1.07) Low: 0.86 (0.49; 1.50)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Dagher et al 2011 [84] USA **Study quality** High	Prospective cohort study Followed for 6 months General population (women) Data collected in 2001	Participants were women delivering a baby, who had been employed at least 20 hours per week in the three months preceding delivery and planned to continue employment after childbirth. Mean age 30 years (range 18–45) Out of the eligible population (n=1 157), a sample of 817 women enrolled in the study n=625 at the third and last follow-up (all women)	**Psychosocial work characteristics** Data were collected by telephone interviews Job satisfaction and time control were assessed by questions developed by Quinn and Staines (1979) Support from supervisor and co-worker was assessed by questions adopted from Bond et al (1991)	**Postpartum depression** Data were collected by telephone interviews using the Edinburgh Postnatal Depression Scale	Association between psychosocial work factors and postpartum depressive symptoms. Fixed effects panel regression of the determinants. Coefficient (SE), t Job satisfaction: −0.2432 (0.1350), −1.80, p=0.072 Supervisor support: 0.0568 (0.1474), 0.39, p=0.700 Co-worker support: 0.1530 (0.1835), 0.83, p=0.405 Time control: −0.2048 (0.0686), −2.98, p=0.003 Total workload: 0.1137 (0.0363), 3.13, p=0.002	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
de Lange et al 2004 [75] The Netherlands **Study quality** High	Prospective cohort. Part of the SMASH study 3 years Different professions 1994–1997	Participants were employees working in 34 Dutch companies, working for at least 1 year in current job and at least 20 hours per week. The average age was 35.6 years. Companies were required not to be involved in any major reorganization during the study period n=668 at the last follow-up 442 women and 1 252 men at baseline	**Psychosocial work factors** Psychosocial work charac- teristics were assessed by self-administered questionnaires Job demands and social support were assessed by Karasek's Job Content Questionnaire Job control was defined as the mean of two scales: skill discretion and decision authority	**Depression** Depression was assessed by a self-administered questionnaire based on a Dutch version of the Center for Epidemio- logical Studies Depression Scale (CES-D)	Correlations between psychosocial work factors (at baseline and at two subsequent measurements) and depression at the last follow-up **Baseline (3 years prior depression assessment)** Job demands: 0.08, p<0.05 Control: −0.10, p<0.05 Social support: −0.04, p: ns **2nd measurement (2 years prior depression assessment)** Job demands: 0.15, p<0.05 Control: −0.15, p<0.05 Social support: −0.13, p<0.05 **3rd measurement (1 year prior depression assessment)** Job demands: 0.10, p<0.05 Control: −0.18, p<0.05 Social support: −0.13, p<0.05	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
de Lange et al 2002 [94] The Netherlands **Study quality** High	Prospective cohort. Part of the SMASH study 3 years Different professions 1994–1997	Participants were employees working in 34 Dutch companies, working for at least 1 year in current job and at least 20 hours per week. The average age was 35.6 years. Companies were required not to be involved in any major reorganization during the study period n=1 473 at the last follow-up 442 women and 1 252 men at baseline	**Psychosocial work factors** Psychosocial work charac- teristics were assessed by self-administered questionnaires Job demands were assessed by a 5-item version of Karasek's Job Content Questionnaire Job control was defined as the mean of two scales: skill discretion and decision authority Within each measurements four stable (no across-time changes) demand-job/ control combinations and six changing exposure groups were formed	**Depression** Depression was assessed by a self-administered questionnaire based on a Dutch version of the Center for Epidemio- logical Studies Depression Scale (CES-D)	Comparison of demand-control history. Mean value (SE) of the outcome variables described for each group Stable high strain vs stable low strain: 1.42 (0.03) vs 1.19 (0.02) Stable active vs stable low strain: 1.33 (0.03) vs 1.19 (0.02) Stable passive vs stable low strain: 1.31 (0.02) vs 1.19 (0.02) Change from low to high strain vs stable low strain: 1.57 (0.08) vs 1.19 (0.02) Change from high to low strain vs stable low strain: 1.34 (0.07) vs 1.19 (0.02) Change from active to passive or low strain vs stable low strain: 1.24 (0.03) vs 1.19 (0.02) Change from low strain to active or passive strain vs stable low strain: 1.25 (0.02) vs 1.19 (0.02) Change from active to passive or high strain vs stable low strain: 1.34 (0.03) vs 1.19 (0.02) Change from high strain to active or passive vs stable low strain: 1.39 (0.03) vs 1.19 (0.02)	Analysis of variation MANOVA F-values Time: $F_{(3, 601)}=12.31$, $p<0.01$ Group: $F_{(9, 603)}=7.89$, $p<0.01$ Time x group: $F_{(27, 1 809)}=1.65$, $p<0.05$

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
d'Errico et al 2011 [111] Italy **Study quality** Moderate *Note*: Data is also presented for blue- and white-collar workers separated	Prospective cohort 5 years Several different professions 1999–2000 and 2005	Participants were members of an Italian trade union representing 206 companies that employed at least 15 workers in a wide range of economic sectors such as power generation and distribution, textile and rubber industries, metalworking, mechanics, motor vehicle manufacturing and communications. Both blue- and white-collar workers participated. Age presented in intervals in the article (15 to 45+ years) n=2 105 participants followed up (2 402 not followed up) 477 women and 1 682 men were followed up	**Several psychosocial factors** Psychosocial factors were assessed by self-administered questionnaires design specifically for the project. Some of the questions of the instrument is described in the article	**Antidepressant medication** Antidepressant medication was assessed by linking the participants´ health-care identification number to a regional health care register. The study archive was then linked to a regional drug prescription register of all drugs prescribed by the national health service (but not by private doctors) A case was defined as at least one anti-depressant prescription during the observation period Antidepressants were eg monoamninooxidase inhibitors, selective serotonine uptake inhibitors and tricyclic antidepressants	Relative risk of antidepressant drug prescription related to workplace factors reported at baseline. RR (95% CI) **Outcome – antidepressant drug prescription** Shift work (none=1) 2 shifts: 1.34 (0.97; 1.86) 3–4 shifts: 1.13 (0.76; 1.69) Irregular shifts: 1.30 (0.71; 2.37) *Overtime (none=1)* Less than 4 hours/week: 1.71 (0.97; 3.01) More than 4 hours/week: 1.00 (0.63; 1.60) *Excessive noise (no=1)* Yes: 1.14 (0.86; 1.52) *Psychological violence (no=1)* Yes: 1.33 (0.83; 2.13) *Demand (low=1)* Intermediate: 1.14 (0.82; 1.58) High: 1.40 (1.00; 1.96) *Control (low=1)* Intermediate: 0.75 (0.55; 1.04) High 0.60 (0.39; 0.91) *Job strain (low=1)* Intermediate: 0.95 (0.65; 1.40) High: 1.27 (0.88; 1.83)	Workplace characteristics associated with the risk of antidepressant drug prescription. Final multivariable models adjusted and stratified for occupational class. RR (95% CI) **Outcome – antidepressant drug prescription** Overtime (none=1) Less than 4 hours/week: 1.82 (1.03; 3.20) More than 4 hours/week: 1.03 (0.65; 1.64)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
DeSanto Iennaco et al 2010 [66] USA **Study quality** Moderate	Retrospective cohort. Historical cohort data from 1996–2003 were used Medium time to follow-up was 4.7 years Heavy industry Measurement between 1996 and 2003	Participants were employees at a large US aluminum manufacturer. They were hourly workers aged 18–64 years with two years of employment. Mean age: 46.2 years Information was collected from human recourses, occupational health, industrial hygiene, personal health insurance claims n=7 566 depression free workers at baseline 451 women and 7 115 men	**Psychosocial work factors** Ratings of physical and psychosocial job demands were assessed by a safety and hygiene manager at each location. The manager used items previously used in the Whitehall II study	**Depression** Depression diagnoses were assessed by health insurance files based on the individual´s personal physician To ensure that the participants entering the study were currently depression free including the preceding two years, some went through face-to-face physician office visits excluding 301 individuals	Association between demand and control and depression. Unadjusted logistic models of depression diagnosis using demand and control exposure. OR (95% CI) **Demand (low=1)** High: 1.62 (1.24; 2.13) Moderate: 1.33 (1.01; 1.75) **Control (high=1)** Low: 0.95 (0.71; 1.26) Moderate: 1.32 (1.01; 1.73) **Demand combined with control** Low demand: 1 High: 1.71 (1.29; 2.25) Moderate: 1.33 (1.01; 1.76) **Control combined with demand** High control: 1 Low: 1.07 (0.80; 1.43) Moderate: 1.47 (1.12; 1.93)	Association between demand and control and depression. Logistic regression models of depression diagnosis using demand and control exposure. OR (95% CI) adjusted for demographics and lifestyle factors **Demand (low=1)** High: 1.53 (1.15; 2.03) Moderate: 1.42 (1.07; 1.89) **Control (high=1)** Low: 0.69 (0.50; 0.94) Moderate: 1.14 (0.86; 1.51)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Fandino-Losada et al 2012 [67] Sweden **Study quality** High	Prospective cohort. Part of the PART study 3 years General population (working) 1990–2000 and 2001–2003	Participants were 20–64 years randomly selected from a Swedish county council register. Only individuals who were working at baseline and who continued in the same job at follow-up were included. Only individuals free of major depression at baseline were included n=4 427 2 415 women and 2 012 men	**Several psychosocial factors** All exposure factors were assessed by self-questionnaire Social climate was assessed by questions from the Swedish demand-control-support questionnaire by Sane et al Demand and control were assessed by a Swedish version of the instrument developed by Theorell and Karasek	**Major depression** Major depression was assessed by self-questionnaire based on the Major Depression Inventory (MDI) by Bech et al	Crude association between study variables at baseline and major depression at follow-up. OR (95% CI) **Women** *Job demands (lowest=1)* Low: 1.41 (0.82; 2.45) High: 1.29 (0.80; 2.09) Highest: 1.61 (1.03; 2.53), p<0.05 *Inadequate skill discretion (lowest=1)* Low: 1.33 (0.81; 2.18) High: 0.88 (0.55; 1.42) Highest: 1.76 (1.09; 2.84) *Inadequate decision authority (lowest=1)* Low: 0.66 (0.37; 1.17) High: 1.25 (0.78; 1.98) Highest: 1.30 (0.83; 2.05) *Inadequate job social climate (lowest=1)* Low: 2.17 (1.23; 3.82), p<0.01 High: 2.19 (1.27; 3.76), p<0.01 Highest: 3.98 (2.33; 6.78) **Men** *Job demands (lowest=1)* Low: 0.66 (0.22; 2.00) High: 0.25 (0.07; 0.86), p<0.05 Highest: 0.74 (0.30; 1.81) *Inadequate skill discretion (lowest=1)* Low: 0.94 (0.36; 2.47) High: 0.31 (0.09; 1.08) Highest: 2.20 (0.91; 5.31) *Inadequate decision authority (lowest=1)* Low: 2.16 (0.80; 5.83) High: 1.37 (0.43; 4.35) Highest: 3.44 (1.30; 9.11), p<0.05 *Inadequate job social climate (lowest=1)* Low: 1.02 (0.32; 3.23) High: 1.11 (0.37; 3.34) Highest: 3.69 (1.42; 9.63)	Adjusted association between study variables at baseline and major depression at follow-up. OR (95% CI) adjusted for each other listed psychosocial variable, age, a number of individual factors, a number of socioeconomic factors, and depressive scores at baseline **Women** *Job demands (lowest=1)* Low: 1.23 (0.67; 2.26) High: 0.94 (0.55; 1.59) Highest: 1.07 (0.64; 1.79) *Inadequate skill discretion (lowest=1)* Low: 1.13 (0.65; 1.95) High: 0.65 (0.37; 1.13) Highest: 1.12 (0.60; 2.10) *Inadequate decision authority (lowest=1)* Low: 0.63 (0.34; 1.17) High: 1.02 (0.60; 1.76) Highest: 0.74 (0.42; 1.30) *Inadequate job social climate (lowest=1)* Low: 2.09 (1.15; 3.81), p<0.05 High: 1.85 (1.03; 3.31), p<0.05 Highest: 2.06 (1.10; 3.83), p<0.05 **Men** *Job demands (low=1)* High: 0.24 (0.10; 0.60), p<0.01 *Inadequate skill discretion (low=1)* High: 0.32 (0.11; 0.90), p<0.05 *Inadequate decision authority (low=1)* High: 0.82 (0.32; 2.07) *Inadequate job social climate (low=1)* High: 1.40 (0.56; 3.48)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Godin et al 2005 [98] Belgium **Study quality** Moderate	Prospective cohort Part of the Somstress study 1 year Enterprises 2000–2001	Participants were workers at four Belgian enterprises, selected according to their economic stability. All workers were invited to participate. Mean age 40.5 years n=1 986 (920 women and 1 066 men) Calculations based on 700 women and 836 men	**Effort-reward imbalance at work** Effort-reward imbalance at work (ERI) was assessed by self-administered questionnaires based on items developed by Siegrist	**Depression** Depression was assessed by self-administered questionnaires based on 16 items from the Symptom Check List SCL90 The depression index was dichotomized at the upper quartile to identify individuals at risk	Depression at follow-up in relation to effort-reward imbalance at work (ERI). Multivariate logistic regression analysis. OR (95% CI) adjusted for age, education, threat from global economy, job dissatisfaction and workplace instability **Women, presence of effort-reward imbalance** Not at baseline or follow-up: 1.00 At baseline, not at follow-up: 1.3 (0.5; 3.2) Not at baseline but at follow-up: 3.2 (1.6; 6.4) Both baseline and follow-up: 4.6 (2.3; 9.0) **Men, presence of effort-reward imbalance** Not at baseline or follow-up: 1.00 At baseline, not at follow-up: 1.2 (0.5; 2.9) Not at baseline but at follow-up: 4.6 (2.3; 9.2) Both baseline and follow-up: 2.8 (1.3; 5.7)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Goodman et al 2009 [82] USA **Study quality Comments** Moderate *Note*: Article has models describing links between work factors – negative work-family spillover – depressive symptoms. Data from these models not listed in the present table	Prospective cohort 18 months General population (employed mothers) No information on which years the measurements were conducted	Participants were employed female caregivers who were biological mothers to their children. Data were drawn from an ongoing longitudinal study of American families. Average age 28 years The most common jobs were nursing, home aide care, cashier, waitress, child care worker, food preparation worker and office clerk n=414 (all women)	**Psychosocial work factors** Information was assessed by trained research assistants conducting home interviews. Mothers also filled in questionnaires *Nonflexible work* Factor was assessed by a modified version of the flexible Work arrangement scale by Bond et al, 1998 *Work pressure* Factor was assessed by a subscale from the Work environment scale by Moos, 1986 *Work status* Work status was defined as part-time for <35 hours per week and full-time for 35 or more hours per week	**Depressive symptoms** Information was assessed by trained research assistants conducting home interviews when the child was 6, 15 and 24 months of age. Mothers also filled in questionnaires At 6 months mothers completed the Depressive symptoms subscale from the Brief symptoms inventory-18 (BSI-18, Derogatis, 2000) At 24 months mothers completed the CES-D scale	Intercorrelation among work stressors and depressive symptoms at last follow-up (when the child was 24 months). Correlation coefficient Hours per week (work status): −0.06 Nonflexible work: 0.026, p<0.001 Work pressure: 0.15, p<0.01	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Griffin et al 2002 [80] United Kingdom **Study quality** Moderate	Prospective cohort. Part of the Whitehall II study Average follow-up time was 5 years Civil servants 1991–1993 and 1997–1999	Participants were 35–55 years when initially enrolling in the cohort (1985–1988) and working in a London-based government civil service department. Retired participants were excluded. Age presented in 5-year categories (39–64 years) n=7 473 2 303 women and 5 170 men	**Decision latitude** Decision latitude was assessed by postal questionnaire using statements from the Job Content Questionnaire by Karasek et al	**Depression** Depression was assessed by postal questionnaire using subscales from the General Health Questionnaire (GHQ)	Gender-specific effects of decision latitude at this study's baseline (third measurement of the Whitehall study) and depression at follow-up (fifth measurement of the Whitehall study). OR (95% CI) estimated by logistic regression considering age and grade (step 2) **Women** Decision latitude: 1.48 (1.15; 1.89), p<0.01 **Men** Decision latitude: 1.53 (1.31; 1.80), p<0.01	Gender-specific effects of decision latitude at this study's baseline (third measurement of the Whitehall study) and depression at follow-up (fifth measurement of the Whitehall study). OR (95% CI) estimated by logistic regression considering age and grade and excluding depression cases at baseline (step 4 repeated) **Women** Decision latitude: 1.15 (0.81; 1.64) **Men** Decision latitude: 1.15 (0.92; 1.44)

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Grynderup et al 2013 [107] Denmark **Study quality** High	Prospective cohort. Part of the PRISME cohort 2 years Public employees 2007 and 2009	Participants were public employees from small work units. Individuals with depression at baseline were excluded from the study. Age of the participants were measured in age groups which ranged from <35 years to >55 years. Age and other characteristics of the population are presented in another publication n=3 047 2 394 women and 653 men	**Justice** Procedural and relational justice were assessed by postal questionnaire using a Danish version of the organizational justice questionnaire originally developed by Moorman and modified by Kivimäki et al	**Depression** Cases of depression were identified by a two-step procedure. First individuals reporting mental symptoms in a questionnaire were identified. Secondly, these individuals were invited to participate in a standardized psychiatric interview identifying cases of depression based on criteria in the ICD-10-DCR	Odds ratios of depression at follow-up by lower levels of justice. Crude OR (95% CI) **Continuous exposure[1]** Procedural justice: 2.58 (1.26; 5.30) Relational justice: 2.83 (1.49; 5.35) **Categorized exposure – procedural justice** High: 1 Medium: 2.17 (1.00; 4.72) Low: 2.61 (1.22, 5.55) **Categorized exposure – relational justice** High: 1 Medium: 1.59 (0.77; 3.31) Low: 2.28 (1.12; 4.62) [1] Assessed as 1-point decrease on a 5-point justice scale	Odds ratios of depression at follow-up by lower levels of justice. OR (95% CI) adjusted for age, gender, previous depression, family history of depression, educational level, income, alcohol consumption, traumatic life events, living alone, depressive mood, smoking, BMI and neuroticism **Continuous exposure[1]** Procedural justice: 2.96 (1.19; 7.34) Relational justice: 4.84 (2.15; 10.90) **Categorized exposure – procedural justice** High: 1 Medium: 1.28 (0.52; 3.15) Low: 2.50 (1.06; 5.88) **Categorized exposure – relational justice** High: 1 Medium: 1.74 (0.71; 4.27) Low: 3.14 (1.37; 7.19) [1] Assessed as 1-point decrease on a 5-point justice scale

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Grynderup et al 2012 [68] Denmark **Study quality** Moderate	Prospective cohort. Part of the PRISME cohort 2 years Public employees 2007 and 2009	Participants were public employees from small work units. Individuals with depression at baseline were excluded from the study. Age of the participants were measured in age groups which ranged from <35 years to >55 years. Age and other characteristics of the population are presented in another publication n=3 046 2 392 women and 654 men	**Demand, control** Demand and control were assessed by postal questionnaire using the model by Karasek and Theorell instrumented by the Copenhagen Psychosocial Questionnaire	**Depression** Cases of depression were identified by a two-step procedure. First individuals reporting mental symptoms in a questionnaire were identified. Secondly, these individuals were invited to participate in a standardized psychiatric interview identifying cases of depression based on criteria in the ICD-10-DCR	Odds ratios of depression by increasing levels of psychological demands and decreasing levels of decision latitude. Crude OR (95% CI) **Psychological demands (low=1)** Medium: 0.58 (0.30; 1.09) High: 0.63 (0.34; 1.17) Continuous: 0.82 (0.42; 1.61) **Decision latitude (high=1)** Medium: 1.40 (0.71; 2.75) Low: 1.42 (0.72; 2.80) Continuous: 1.48 (0.55; 4.01)	Odds ratios of depression by increasing levels of psychological demands and decreasing levels of decision latitude. OR (95% CI) adjusted for age, gender, previous depression, family history, educational level, income, alcohol consumption, traumatic life events, depressive symptoms, smoking, BMI, fulltime work, and neuroticism **Psychological demands (low=1)** Medium: 0.72 (0.33; 1.57) High: 0.80 (0.38; 1.69) Continuous: 1.07 (0.46; 2.49) **Decision latitude (high=1)** Medium: 1.30 (0.56; 3.02) Low: 1.65 (0.72; 3.74) Continuous: 1.85 (0.55; 6.26)
Grzywacz et al 2010 [96] USA **Study quality** Moderate	Prospective cohort 4 months Farm workers 2007	Participants were recruited from 41 inhabited camps in 11 counties with large migrant and seasonal farm worker populations. Most (59%) were over 30 years old n=288 25 women and 263 men	**Pace of work** Pace of work was assessed by observing the farm workers	**Depressive symptoms** Depressive symptoms were assessed by interview using the CES-D scale	Association of baseline characteristics with depressive symptoms across the agricultural season. b (SE), model control for effects of age, gender and years in the US Pace of work: 0.15 (0.03), p<0.001	Multivariate association of stressors with depressive symptoms across the agricultural season. b (SE), model control for effects of age, gender and years in the US Pace of work: 0.16 (0.03), p<0.001

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Ibrahim et al 2009 [93] Canada **Study quality Comments** High *Note*: Coefficients are also presented by occupational category (not included in the present table)	Prospective cohort study. Data from the Canadian National Population Health Survey 8 years General population (working) 1994–1995 and 2002–2003	Participants were aged 18–56 years, in the labour force and in the same social class for all three measurements conducted within the study. Mean age 37 years n=2 556 1 107 women and 1 449 men	**Psychosocial work factors** Psychosocial work factors were assessed by interview Job strain, work social support and job insecurity were assessed using an abbreviated version of the Job Content Questionnaire	**Depression** Depression was assessed by interview using the Composite International Diagnostic Interview short form (CIDI-SF) The mean number of persons with depression was 178 in year 1994, 228 in year 2000 and 225 in year 2002	Unstandardized path coefficients for work factors and depression. All participants. Correlation **Work factors at baseline and depression at first follow-up** Job strain ratio: 0.508, p<0.01 Work social support: 0.004 Job insecurity: 0.026 **Work factors at first follow-up and depression at second follow-up** Job strain ratio: 0.561, p<0.01 Work social support: −0.038 Job insecurity: 0.073	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Jensen et al 2010 [183] Denmark **Study quality Comments** Moderate *Note:* Study not used for results since the expert group decided during the project time not to write about results regarding work satisfaction	Prospective cohort study partly based on registers Public service employees, mostly health sector Survey: 2002–2005 Register follow-up: 2002–2008 Follow-up started in January 2002 or when cohort members entered the work unit, whichever came last, and ended when they discontinued their job, died, emigrated, were hospitalized or were treated for mental health disorders or in April 2008, whichever came first	Participants were public service employees from 683 workplaces in Danish county. Age presented in 10 year categories n=13 423 10 554 women and 2 869 men	**Satisfaction with work climate** Satisfaction with work climate was assessed by a workplace questionnaire (handed out and collected at workplace) developed by the authors The individual responses were computed as aggregated average workplace unit scores, and assigned to the employee at the specific work unit, independently of the individual response	**Depressive disorder** First ever diagnoses of affective disorders (referred to as depressive disorders) were assessed by data on hospital and outpatient treatments of psychiatric disorders from a Danish psychiatric register	Hazard rates of depressive disorder according to level of satisfaction with psychosocial work climate. Hazard rates (95% CI) adjusted for gender, age and occupational grade **Work climate satisfaction (high=1)** Intermediate: 1.70 (0.91; 3.18) Low: 1.72 (0.86; 3.44)	–

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Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Kivimäki et al 2007 [99] Finland **Study quality** Moderate	Prospective cohort study 2–4 years Public sector and health care 2000–2002 and 2004	Participants were employees at Finnish hospitals (mean age 43 years) and local government employees (mean age 44 years) n=22 899 at follow-up (18 066 public sector + 4 833 health care)	**Several psychosocial factors** Psychosocial factors were assessed by self-questionnaire developed by the authors. Items are described in the article	**Depression** Depression was assessed by self-questionnaire where the respondent reported whether a medical doctor had diagnosed him or her as having a depression	Adjusted odds ratios for depression at follow-up by levels of effort-reward imbalance and injustice at baseline. OR (95% CI) adjusted for age, gender and occupational status **Governmental employees** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.02 (0.83; 1.27) 3: 1.12 (0.92; 1.35) 4 (highest): 1.66 (1.38; 2.01) *Procedural injustice quartile (1 (lowest)=1)* 2: 1.17 (0.96; 1.42) 3: 1.26 (1.03; 1.54) 4 (highest): 1.56 (1.28; 1.90) *Relational injustice quartile (1 (lowest)=1)* 2: 0.99 (0.81; 1.21) 3: 1.26 (1.03; 1.53) 4 (highest): 1.57 (1.29; 1.89) **Hospital personnel** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.65 (1.00; 2.73) 3: 1.58 (0.92; 2.73) 4 (highest): 1.93 (1.16; 3.20) *Procedural injustice quartile (1 (lowest)=1)* 2: 1.29 (0.78; 2.12) 3: 1.78 (1.12; 1.54) 4 (highest): 1.46 (0.98; 2.40)* *Relational injustice quartile (1 (lowest)=1)* 2: 1.50 (0.87; 2.59) 3: 1.96 (1.14; 3.36) 4 (highest): 2.45 (1.47; 4.09) *Results continue on the next page*	Adjusted odds ratios for depression at follow-up by levels of effort-reward imbalance and injustice at baseline. OR (95% CI) adjusted for age, gender, occupational status, effort-reward imbalance and both types of injustice **Governmental employees** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.01 (0.81; 1.25) 3: 1.06 (0.87; 1.29) 4 (highest): 1.48 (1.21; 1.80) *Procedural injustice quartile (1 (lowest)=1)* 2: 1.07 (0.87; 1.31) 3: 1.08 (0.87; 1.34) 4 (highest): 1.22 (0.97; 1.52) *Relational injustice quartile (1 (lowest)=1)* 2: 0.96 (0.78; 1.18) 3: 1.17 (0.95; 1.44) 4 (highest): 1.32 (1.07; 1.63) **Hospital personnel** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.53 (0.93; 2.54) 3: 1.43 (0.82; 2.47) 4 (highest): 1.58 (0.93; 2.68) *Procedural injustice quartile (1 (lowest)=1)* 2: 1.08 (0.65; 1.80) 3: 1.38 (0.85; 2.24) 4 (highest): 1.06 (0.62; 1.81) *Relational injustice quartile (1 (lowest)=1)* 2: 1.40 (0.81; 2.43) 3: 1.77 (1.02; 3.07) 4 (highest): 2.13 (1.24; 3.64) *Results continue on the next page*

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Continued Kivimäki et al 2007 [99] Finland					**Participants who were healthy at baseline** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.01 (0.81; 1.25) 3: 1.06 (0.87; 1.28) 4 (highest): 1.49 (1.22; 1.81) *Organizational injustice quartile (1 (lowest)=1)* 2: 1.12 (0.92; 1.38) 3: 1.24 (1.01; 1.52) 4 (highest): 1.52 (1.24; 1.86) * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	**Participants who were healthy at baseline** *Effort-reward imbalance (1 (lowest)=1)* 2: 1.54 (0.93; 2.55) 3: 1.43 (0.82; 2.48) 4 (highest): 1.52 (0.89; 2.58) *Organizational injustice quartile (1 (lowest)=1)* 2: 0.96 (0.56; 1.64) 3: 1.46 (0.89; 2.41) 4 (highest): 1.87 (1.15; 3.05)
Kivimäki et al 2003 [112] Finland **Study quality** Moderate	Prospective cohort study 2 years Health care 1998 and 2000	Participants were employees at Finnish hospitals aged 18–63 years. Most of them were nurses, but other professions were also present (eg doctors, laboratory staff and maintenance) n=5 432 4 831 women and 601 men	**Bullying** Bullying was assessed by self-questionnaire using an instrument developed by the authors	**Depression** Depression was assessed by self-questionnaire where the respondent reported whether a medical doctor had diagnosed him or her as having a depression	Association of bullying with incidence of depression. Crude OR (95% CI) **Subjected to bullying** At neither baseline nor follow-up: 1.00 At one time: 0.73 (0.43; 1.22) At both times: 2.53 (1.28; 5.03)	Association of bullying with incidence of depression. OR (95% CI) adjusted for gender, five year age categories and income **Subjected to bullying** At neither baseline nor follow-up: 1.00 At one time: 0.72 (0.43; 1.21) At both times: 2.31 (1.15; 4.63)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Kouvonen et al 2008 [104] Finland **Study quality** Moderate *Note:* Odds ratios are also presented for anti-depressant treatment and a combination of diagnosis and drug treatment (not included in the present table)	Prospective cohort study with data from the Finnish Public Sector Study Approximately 4 years Public sector Baseline year 2000–2002, follow-up year 2004–2005	Participants were personnel living in one of ten towns or working at 21 hospitals. Each participant had to be working in units of at least three employees. Participants who had a current or preexisting physician-diagnosed depression or recent history of antidepressant treatment at baseline were excluded n=33 577 26 954 women and 6 623 men	**Social capital** Social capital was assessed with a self-assessment scale developed by the authors Social capital reflects the relations between the individuals and groups of people	**Depression** Depression was assessed using a questionnaire requesting physician-diagnosed depression Depression was based on register data (National Prescription Register; purchase of antidepres- sants classified according to therapeutic classification code) and survey responses (respondents indicated diseases on a list and physician-diagnosed information was used to verify the diagnosis)	Association of social capital at baseline with self-reported, physician-diagnosed depression at follow-up in respondents initially free from depression. OR (95% CI) adjusted for gender, age, marital status, socioeconomic position and place of work **Social capital at individual level** 1 (low): 1.53 (1.30; 1.81) 2: 1.16 (0.97; 1.38) 3: 1.10 (0.92; 1.30) 4 (high): 1.00 (referent) Test for linear trend: p<0.0001 **Social capital at aggregate level** 1 (low): 1.02 (0.86; 1.22) 2: 0.98 (0.83; 1.17) 3: 0.98 (0.82; 1.16) 4 (high): 1.00 (referent) Test for linear trend: p=0.73	Association of social capital at baseline with self-reported, physician-diagnosed depression at follow-up in respondents initially free from depression. OR (95% CI) adjusted for gender, age, marital status, socioeconomic position and place of work + for health behaviours and psychological distress **Social capital at individual level** 1 (low): 1.20 (1.01; 1.42) 2: 1.04 (0.87; 1.24) 3: 1.03 (0.87; 1.23) 4 (high): 1.00 (referent) Test for linear trend: p=0.007 **Social capital at aggregate level** 1 (low): 0.95 (0.79; 1.14) 2: 0.94 (0.79; 1.12) 3: 0.95 (0.79; 1.13) 4 (high): 1.00 (referent) Test for linear trend: p=0.64

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Lang et al 2011 [109] Several countries **Study quality** Moderate	Prospective cohort with three samples. Cross-lagged panel longitudinal design 6 or 3 months depending on sample Militaries Years of data collection not specified	Participants were soldiers. In sample 1, the active duty soldiers were deployed on a peacekeeping mission (age: 27 years). Sample 2 were reserve soldiers who were activated during a terrorist attack in the US (age: 32 years). Sample 3 were reservists on security augmentation deployment in Europe (age: 31 years) n=1 309 (sample 1: 625, sample 2: 134, sample 3: 550) 58 women and 1 251 men	**Justice** Justice was assessed with an instrument developed by Colquitt, 2001. The instrument was slightly modified to fit the military context	**Depression** Depression was assessed with a short version of the Center for Epidemio- logical Studies Depression Scale, CES-D-SC, (sample 1) and with the Patient Health Questionnaire for Depression by Kroenke, PHQ-9, (samples 2 and 3)	Cross-lagged effects of justice on depression. Model estimated for the different samples. Standardized coefficient (SE) **Sample 1 (active duty soldiers)** Distributive justice: −0.03 (0.03) Interpersonal justice: −0.04 (0.04) Informational justice: −0.01 (0.04) Interactional justice: −0.02 (0.04) **Sample 2 (soldiers active at terror attack)** Distributive justice: −0.05 (0.11) Interpersonal justice: −0.05 (0.11) Informational justice: −0.06 (0.11) Interactional justice: −0.06 (0.11) Procedural justice: 0.12 (0.13)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Levin et al 2012 [97] USA **Study quality** Moderate	Prospective cohort 10 months Attorneys 2010	Participants were attorneys working at the State Public Defender´s offices. Mean age 46 years. Cases run from mild violence or substance abuse to homicide n=107 56 women and 51 men	**Trauma exposure and weekly work hours** Exposure to violence and weekly working hours were assessed by self-questionnaire with questions developed by the authors	**Depressive symptoms** Depressive symptoms were assessed with the Center for Epidemiological Studies Depression Scale, CES-D	Cross-lagged model for prediction of depressive symptoms. Effects of work factors at baseline on depressive symptoms at follow-up Hours at work: beta: 0.10, t: 1.37, p: ns Exposure to clients´ traumatic events: beta: 0.20, t: 2.79, p<0.01 (two-tailed)	When the cross-lagged model for prediction of depressive symptoms was controlled for the effects of gender, age, years on the job and size of local office, the significant and non-significant effects were not altered

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Magnusson Hanson et al 2009 [76] Sweden **Study quality Comments** High *Note*: data are also presented as associations with all predictors entered in the same model	Prospective cohort. Part of the SLOSH cohort 3 years General population (working) 2003 and 2006	Participants were part of the Swedish labour force aged 16–64 years. All participants work at least 30% at baseline. Both those who were working and those non-working at follow-up were included, except for participants with missing data on working conditions or depressive symptoms n=5 985 3 265 women and 2 720 men	**Several psychosocial variables** Psychosocial variables were assessed by self-questionnaire based on questions described in the article	**Depressive symptoms** Depressive symptoms were assessed by self-questionnaire using the Hopkins Symptom Checklist (SCL-90 by Lipmann 1986). Focus was on items corresponding to the 6-item Hamilton Depression Scale (HAM-D by Bech 2008)	Associations between conditions at baseline and depressive symptoms at follow-up. B, SE, Beta, adjusted R^2 adjusted for depressive symptoms at baseline **Women** *Demands* −0.03, 0.01, −0.03, 0.18 *Decision authority* −0.13, 0.04, −0.06 (p<0.001), 0.19 *Support from superiors* 0.01, 0.03, 0.01, 0.18 *Support from fellow workers* −0.08, 0.03, −0.04 (p<0.01), 0.18 *Conflict with superiors* 0.09, 0.03, 0.05 (p<0.01), 0.18 *Conflict with fellow workers* 0.10, 0.03, 0.06 (p<0.01), 0.18 **Men** *Demands* −0.06, 0.01, −0.08 (p<0.001), 0.25 *Decision authority* −0.15, 0.04, −0.07 (p<0.001), 0.25 *Support from superiors* −0.06, 0.03, −0.04 (p<0.05), 0.24 *Support from fellow workers* −0.03, 0.03, −0.02, 0.24 *Conflict with superiors* 0.09, 0.03, 0.05 (p<0.01), 0.25 *Conflict with fellow workers* 0.13, 0.03, 0.08 (p<0.001), 0.25	Associations between conditions at baseline and depressive symptoms at follow-up. B, SE, Beta, adjusted R^2 also adjusted for age, marital status, birth country, labour market sector, income and employment status **Women** *Demands* −0.02, 0.01, −0.02, 0.20 *Decision authority* −0.13, 0.04, −0.06 (p<0.001), 0.21 *Support from superiors* 0.00, 0.03, 0.00, 0.20 *Support from fellow workers* −0.09, 0.03, −0.05 (p<0.01), 0.20 *Conflict with superiors* 0.08, 0.03, 0.04 (p<0.05), 0.20 *Conflict with fellow workers* 0.09, 0.03, 0.05 (p<0.01), 0.20 **Men** *Demands* −0.05, 0.01, −0.07 (p<0.001), 0.26 *Decision authority* −0.12, 0.04, −0.06 (p<0.01), 0.26 *Support from superiors* −0.07, 0.03, −0.04 (p<0.05), 0.25 *Support from fellow workers* −0.06, 0.03, −0.03, 0.25 *Conflict with superiors* 0.09, 0.03, 0.05 (p<0.01), 0.26 *Conflict with fellow workers* 0.14, 0.03, 0.08 (p<0.001), 0.26

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Mantyniemi et al 2012 [92] Finland **Study quality** Moderate	Prospective cohort. Part of the Finnish Public Sector Study Baseline 2000–2002. Incidence was measured from the first day of the year following the survey Public sector employees	Participants were employees in the municipal services of Finnish towns or hospitals with at least 6 months job contact in the target organizations. Age 17–64 years n=69 842 at baseline 53 229 women and 16 613 men at baseline	**Job strain** Job strain was assessed by self-questionnaire based on the Job Content Questionnaire by Laine et al	**Disability pension caused by depression** Participants were linked to a national register by personal identification number. The main diagnoses for disability pension were coded according to the International Classification of Diseases, 10th revision (ICD-10). Analysis for depression was based on codes F32–F34	Job strain and cause-specific disability pension. HR (95% CI) **Women** Occupation based: 1.24 (1.00; 1.53) Work unit based: 1.15 (0.97; 1.37) **Men** Occupation based: 1.30 (0.78; 2.16) Work unit based: 1.59 (1.03; 2.47)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Niedhammer et al 1998 [69] France **Study quality** Moderate	Prospective cohort study. Part of the Gazel cohort study 1 year Several occupations in a company 1995 and 1996	Participants were working at a French gas and electricity company. Men aged 46–56 years and women aged 41–56 years n=11 552 3 130 women and 8 422 men	**Psychosocial factors** Psychosocial factors were assessed with a self-questionnaire based on items by Karasek et al and by Johnson et al 1988 and 1989	**Depressive symptoms** Depressive symptoms were assessed by using the CES-D scale	Factors associated with subsequent depressive symptoms according to logistic regression analysis. OR (95% CI) **Women** *Stressful occupational events (0=reference)* 1: 1.44 (1.14; 1.82) 2 or more: 2.04 (1.47; 2.85) *Psychological demands (low=reference)* High: 1.37 (1.13; 1.67) *Decision latitude (high=reference)* Low: 1.41 (1.15; 1.73) *Social support at work (high=reference)* Low: 1.29 (1.06, 1.57) **Men** *Stressful occupational events (0=reference)* 1: 1.57 (1.37; 1.79) 2 or more: 1.73 (1.40; 2.14) *Psychological demands (low=reference)* High: 1.77 (1.57; 1.99) *Decision latitude (high=reference)* Low: 1.38 (1.22; 1.56) *Social support at work (high=reference)* Low: 1.58 (1.41; 1.78)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Oksanen et al 2010 [101] Finland **Study quality Comments** Moderate *Note:* Odds ratios are also presented for anti-depressant treatment and a combination of diagnosis and drug treatment (not included in the present table)	Prospective cohort study with data from the Finnish Public Sector Study Average 3.5 years Public sector Baseline year 2000–2002, follow-up year 2004–2005	Participants were personnel at one of ten towns or 21 hospitals working in units of at least three employees. Participants who had a current or preexisting physician-diagnosed depression or recent history of antidepressant treatment at baseline were excluded. Mean age 44 years n=25 763 19 580 women and 6 183 men	**Social capital** Social capital was assessed with a self-assessment scale developed by the authors Social capital reflects the relations between the individuals and groups of people Horizontal component Social contracts, trust, reciprocity and cooperation among co-workers at the same hierarchical level Vertical component Trust and reciprocity between supervisor/ employer and employee	**Depression** Depression was assessed using a questionnaire with items on physician-diagnosed depression Depression was based on register data (National Prescription Register; purchase of antidepres-sants classified according to therapeutic classification code) and survey responses (respondents indicated diseases on a list and physician-diagnosed information was used to verify the diagnosis)	Association of vertical and horizontal component social capital at baseline with self-reported, physician-diagnosed depression at follow-up in respondents initially free from depression. OR (95% CI) adjusted for gender, age, marital status, socioeconomic position and place of work **All subjects (4, high: 1.00)** *Social capital – vertical component* 1 (low): 1.42 (1.20; 1.69) 2: 1.06 (0.88; 1.28) 3: 1.00 (0.85; 1.18) *Social capital – horizontal component* 1 (low): 1.47 (1.25; 1.74) 2: 1.14 (0.94; 1.38) 3: 1.04 (0.88; 1.23) **Women (4, high: 1.00)** *Social capital – vertical component* 1 (low): 1.36 (1.13; 1.63) 2: 1.06 (0.82; 1.22) 3: 0.93 (0.78; 1.11) *Social capital – horizontal component* 1 (low): 1.41 (1.18; 1.69) 2: 1.13 (0.92; 1.40) 3: 1.03 (0.86; 1.24) **Men (4, high: 1.00)** *Social capital – vertical component* 1 (low): 2.10 (1.27; 3.47) 2: 1.61 (0.94; 2.06) 3: 1.62 (1.01; 2.61) *Social capital – horizontal component* 1 (low): 1.94 (1.21; 3.11) 2: 1.24 (0.71; 2.16) 3: 1.14 (0.69; 1.89)	Association of vertical and horizontal component social capital at baseline with self-reported, physician diagnosed depression at follow-up in respondents initially free from depression. OR (95% CI) adjusted for gender, age, marital status, socioeconomic position and place of work + for health behaviours and psychological distress **All subjects (4, high: 1.00)** *Social capital – vertical component* 1 (low): 1.24 (1.03; 1.50) 2: 0.97 (0.80; 1.18) 3: 0.96 (0.82; 1.14) *Social capital – horizontal component* 1 (low): 1.36 (1.14; 1.63) 2: 1.11 (0.91; 1.35) 3: 1.03 (0.87; 1.23)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Parker 2003 [83] United Kingdom	Longitudinal cohort with quasi-experimental design	Participants were employed at a specific company. They were either in lean production groups or in control groups (engineers, technical staff and non-administrative support staff). Mean age at baseline was 37 years	**Psychosocial work factors** Job autonomy was assessed using a shortened version of instrument by Jackson et al, 1993	**Depression** Depression was assessed using a part of the instrument by Warr, 1990	Correlation between work factors at baseline and job depression 3 years later	–
Study quality Comments Moderate	3 years Production line work – large vehicles Exact years of measurement not specified		Skill utilization and participation in decision making were assessed using a part of the instrument by Jackson et al, 2000		Job autonomy: –0.10 Skill utilization: –0.30, p<0.01 Participation in decision making: –0.24, p<0.01 Role overload: 0.05	
Note: Study performed at UK-based company taken over by US owners		n=368 7 women and 361 men				
Study also compares lean production to other organizational forms (not included in the present table)			Role overload (such as having too much to do) was assessed using an instrument by Caplan et al, 1975			

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Paterniti et al 2002 [77] France **Study quality** Moderate	Prospective cohort. Part of the Gazel study 3 years Industry 1993, 1995, 1996	Participants were employees at a gas and electricity company and members of the Gazel cohort. Age 35–50 years. Mean age 48 years (men) and 46 years (women). Subjects were working during the study period n=10 519 at the last follow-up in 1996 2 790 women and 7 729 men. Linear regression based on 2 009 women and 6 145 men	**Psychosocial work factors and physical workload** Psychosocial factors at work were assessed with self-administered questionnaire based on instruments developed by Karasek and Johnson Physical workload and stressful events were assessed with self-administered questionnaire based on instruments developed by the authors	**Depressive symptoms** Depressive symptoms were assessed with self-administered questionnaire based on the CES-D-scale	Linear regression models; predictors of change in CES-D scores. b (SE) adjusted for age, educational level, marital status, family income, stressful personal events, presence of chronic diseases and CES-D scores at baseline **Block 1 of the model** *Women (n=2 009)* Stressful occupational events: 0.92 (0.40), p<0.05 Changing working hours: 0.20 (0.46) Physical workload factors: 0.71 (0.30), p<0.05 *Men (n=6 145)* Stressful occupational events: 0.53 (0.17), p<0.01 Changing working hours: 0.36 (0.20) Physical workload factors: 0.15 (0.08), p<0.05 **Block 2 of the model** *Women (n=2 009)* Decision latitude: −0.06 (0.08) Job demands: 0.28 (0.08), p<0.001 Social support at work1: 0.20 (0.09), p<0.05 *Men (n=6 145)* Decision latitude: −0.19 (0.04), p<0.001 Job demands: 0.36 (0.03), p<0.001 Social support at work1: 0.22 (0.04), p<0.001 [1] The higher the score, the lower the social support at work	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Plaisier et al 2007 [71] The Netherlands **Study quality** High	Prospective cohort. Part of the NEMESIS study 2 years General Dutch population 1997 and 1999	Participants were a representative sample of the Dutch general population. Only persons with paid work (8 hours or more per week) and persons without any existing mental disorder in the year prior to baseline were included. Age 18–65 years. Mean age 38 years (women) and 40 years (men) n=2 646 1 117 women and 1 529 men	**Psychosocial work factors** Psychological demands, decision latitude and job-security were assessed with the Job Content Questionnaire by Karasek et al Social support was assessed with the Social support questionnaire for transactions and satisfaction by Doeglas et al	**Depressive disorder** Depressive disorder was assessed by interview by trained and intensively monitored interviewers. The primary diagnostic instrument was the Composite International Diagnostic Interview (CIDI) The dependent variable was 2-year incidence of depressive disorder, as defined by DSM-III-R criteria	Relative risk of 2 year incidence of depressive disorder by working condition. RR (95% CI) adjusted for age, gender, health and education Psychological demands: 3.49 (1.93; 6.32), p<0.001, gender interaction p=0.55 Decision latitude: 0.83 (0.31; 2.23), gender interaction p=0.69 Job security: 0.72 (0.38; 1.34), gender interaction p=0.46 Daily emotional support: 0.79 (0.71; 0.89), p<0.001, gender interaction p<0.01	Relative risk of 2 year incidence of depressive disorder. RR (95% CI) in different models Unadjusted gender risk: 1.99 (1.37; 2.89), p<0.001 Gender risk adjusted for age, health and education: 1.90 (1.30; 2.78), p<0.001 Gender risk adjusted for age, health and education and for daily emotional support: 2.03 (1.37; 3.01), p<0.001 Gender risk adjusted for age, health and education and for social support: 2.29 (1.55; 3.38), p<0.001 Gender risk adjusted for age, health and education, for daily emotional support and for social support: 2.45 (1.63; 3.68), p<0.001

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Rugulies et al 2012 [100] Denmark	Prospective cohort. Part of the Danish Work Environment Cohort	Participants were a random sample of Danish residents drawn from a population register. Only persons employed at the time of the survey were eligible to participate. Persons with severe depressive symptoms at baseline were excluded. Age described in 5-year intervals	**Effort-reward imbalance** Effort-reward imbalance was assessed with proxy measures (procedure described by Rugulies et al, 2009). Assessments were based on the concept developed by Siegrist et al	**Severe depressive symptoms** Severe depressive symptoms were assessed with the Danish version of the 5-item Short Form Health Survey of the 36-item Mental Health Survey (MHI-5)	Effort-reward imbalance at baseline and risk of onset of severe depression symptoms at follow-up. OR (95% CI) adjusted for gender, age, family status, survey method and health behaviours **Effort-reward imbalance** Low: 1 (reference) Medium-low: 1.75 (0.88; 3.48) Medium-high: 2.08 (1.05; 4.09) High: 3.50 (1.85; 6.63) Test for trend: p<0.001	Effort-reward imbalance at baseline and risk of onset of severe depression symptoms at follow-up. OR (95% CI) adjusted for gender, age, family status, survey method, health behaviours and for self-rated health, sleep disturbance and non-severe depressive symptoms score at baseline **Effort-reward imbalance** Low: 1 (reference) Medium-low: 1.55 (0.77; 3.10) Medium-high: 1.68 (0.85; 3.34) High: 2.19 (1.12; 4.25) Test for trend: p<0.02
Study quality Moderate *Note*: data are also presented for effort-reward imbalance in combination with occupation grade (not listed in the present table)	5 years General population (working) 2000 and 2005	n=2 701 1 366 women and 1 335 men				

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Rugulies et al 2012 [113] Denmark	Prospective cohort	Participants were employees in the Danish eldercare sector. Participants worked mainly in care work. Some had non-care work such as kitchen cleaning or administration. Mean age 46 years	**Bullying** Bullying was assessed by questionnaire using questions developed by the authors (described in the article)	**Major depressive episode** Major depressive episode was assessed by self-rating in a questionnaire using the major Depression Inventory (MDI)	Prospective analyses on exposure to workplace bullying at baseline and onset of major depressive episode at follow-up among female employees in eldercare free of major depression at baseline. Crude OR (95% CI)	Prospective analyses on exposure to workplace bullying at baseline and onset of major depressive episode at follow-up among female employees in eldercare free of major depression at baseline. OR (95% CI) adjusted for age, cohabitation, type of job, seniority and length of follow-up
Study quality High	Approximately 2 years Eldercare sector 2004–2005 and 2006–2007				**All participants** *Exposure to bullying (no=1)* Occasional: 2.33 (1.38; 3.92) Frequent: 8.36 (4.03; 17.35)	**All participants** *Exposure to bullying (no=1)* Occasional: 2.22 (1.31; 3.76) Frequent: 8.45 (4.04; 17.70)
		n=5 701 (6 304 at baseline) 6 070 women and 234 men at baseline (369 participant were excluded due to missing values) Nb: Analyses are made only on female participants			**Participants with no signs of reduced psychological health at baseline** *Exposure to bullying (no=1)* Occasional: 2.50 (1.10; 5.67) Frequent: 5.35 (1.25; 22.95)	**Participants with no signs of reduced psychological health at baseline** *Exposure to bullying (no=1)* Occasional: 2.48 (1.09; 5.65) Frequent: 5.61 (1.29; 24.36)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Rugulies et al 2010 [115] Denmark **Study quality** Moderate	Prospective cohort 3.5 years General population (working) Baseline data were register data on unemployment 1996–1999, antidepressants (1995–2000) and survey data (2000) Follow-up data on antidepressants were 2000–2003	Participants were based on a random sample of the Danish general population 15 years and older drawn from a national register on socio-demographic variables and employment history. A random sample cohort of Danish residents aged 40–50 years was drawn. A second sample included Danish residents 37–56 years who had been unemployed at least 70% of the time between 1996–1999. All participants were employed at baseline, were not past users of antidepressants, did not have a major depression n=5 142 2 725 women and 2 417 men	**Job insecurity** Job insecurity was assessed by a postal questionnaire using questions developed by the authors (presented in the article)	**Antidepressant medication** Use of antidepressant medication was defined by dispensing of an antidepressant at a pharmacy. Data were retrieved from a national register using all types of antidepressants according to the anatomical therapeutic chemical (ATC) classification system Current or past use of antidepressants was defined by an entry N06A in the database the month after the baseline survey was completed. Incident use was defined by and entry N06A during the follow-up and no current or past use of antidepressant	Job insecurity and incident antidepressant use among a sample of Danish employees. OR (95% CI) adjusted for gender, age, cohabitation, socioeconomic position and alcohol consumption **Job insecurity (no=1)** Yes: 1.43 (1.09; 1.88) **Job insecurity/history of unemployment** No/no (reference): 1.00 Yes/no: 1.24 (0.91; 1.68) No/yes: 1.08 (0.60; 1.96) Yes/yes: 2.38 (1.56; 3.64)	Job insecurity and incident antidepressant use among a sample of Danish employees. OR (95% CI) adjusted for gender, age, cohabitation, socioeconomic position, alcohol consumption and depressive symptoms at baseline **Job insecurity (no=1)** Yes: 1.15 (0.87; 1.52) **Job insecurity/history of unemployment** No/no (reference): 1.00 Yes/no: 1.02 (0.74; 1.39) No/yes: 1.10 (0.60; 2.00) Yes/yes: 1.79 (1.15; 2.79)

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Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Rugulies et al 2006 [72] Denmark **Study quality Comments** Moderate *Note*: Data Is also presented as incidence for exposed and unexposed groups	Prospective cohort. Part of the Danish Work Environment Cohort 5 years General population (working) 1995 and 2000	Participants were a random sample of Danish residents drawn from a population register. Only persons employed at the time of the survey were eligible to participate. Persons with severe depressive symptoms at baseline were excluded. Age described in 5-year intervals n=4 133 2 004 women and 2 129 men	**Psychosocial work factors** Work factors were assessed with questions developed by the authors. All questions are specified in an appendix included in the article Subjects were interviewed by telephone	**Severe depressive symptoms** Severe depressive symptoms were assessed with the Danish version of the 5-item Short Form Health Survey of the 36-item Mental Health Survey (MHI-5) Subjects were interviewed by telephone	Impact of psychosocial work characteristics on the incidence of severe depressive symptoms. Relative risk (95% CI) adjusted for age, family status, school education, change in employment status and depression score at baseline **Women** Qualitative demands, high: 0.80 (0.46; 1.39) Influence at work, low: 2.23 (1.27; 3.92) Possible development, low: 1.14 (0.68; 1.91) Job insecurity: 1.21 (0.73; 1.99) *Social support* From supervisors, low: 2.05 (1.22; 3.46) From co-workers, low: 1.07 (0.51; 2.25) **Men** Qualitative demands, high: 0.47 (0.18; 1.19) Influence at work, low: 0.61 (0.30; 1.23) Possible development, low: 1.18 (0.58; 2.39) Job insecurity: 2.04 (1.02; 4.06) *Social support* From supervisors, low: 1.20 (0.60; 2.40) From co-workers, low: 1.33 (0.61; 2.92)	Impact of psychosocial work characteristics on the incidence of severe depressive symptoms. Relative risk (95% CI) also adjusted for smoking, alcohol consumption, leisure time physical activity and socioeconomic position **Women** Qualitative demands, high: 0.97 (0.55; 1.70) Influence at work, low: 1.96 (1.10; 3.47) Possible development, low: 0.86 (0.49; 1.50) Job insecurity, yes: 1.04 (0.62; 1.74) *Social support* From supervisors, low: 1.92 (1.13; 3.26) From co-workers, low: 0.98 (0.46; 2.11) **Men** Qualitative demands, high: 0.48 (0.19; 1.25) Influence at work, low: 0.60 (0.29; 1.24) Possible development, low: 1.26 (0.59; 2.67) Job insecurity, yes: 2.09 (1.04; 4.20) *Social support* From supervisors, low: 1.15 (0.57; 2.32) From co-workers, low: 1.26 (0.57; 2.82)

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Schonfeld 2001 [95] USA **Study quality** Moderate	Prospective cohort One school-year follow-up Schools 1989–1990	Participants were teachers in their first employment. Participants were recruited during their last courses in teacher-training. They were first-time full-time teachers during the fall-term and continued teaching in the same schools during the spring term n=184 (all women)	**Psychosocial work factors** Job satisfaction was assessed with an item adapted from Quinn et al, 1979 Stressors in the school environment were assessed with items developed by the authors	**Depressive symptoms** Depressive symptoms were assessed with CES-D	Correlation between depressive symptoms measured in the spring and risk factors measured in the fall Episodic stress: 0.31, $p<0.001$ Ongoing stress: 0.35, $p<0.001$ Colleague support: −0.20, $p<0.01$ Supervisor support: −0.21, $p<0.01$ Job satisfaction: −0.25, $p<0.001$	The regression of depressive symptoms measured in the spring on earlier measured predictors measured in the fall. Beta (R^2) controlled for age, social class, race, marital status and undesirable fateful life events outside work Episodic stress: 0.26 (0.06), $p<0.001$ Colleague support: 0.05 (0.00) Supervisor support: −0.07 (0.00)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Shields 2006 [86] Canada **Study quality** Moderate	Prospective cohort. Part of the National Population Health Study 2 years follow-up in two cycles General population (working) Respondents were first interviewed in 1994/95 and then re-interviewed every two years	Participants were randomly selected working persons aged 18–75 years. Subjects were working at the time of the interview n=12 011 **1994–1995** Women: 2 994 Men: 3 199 **2000–2001** Women: 2 892 Men: 2 926	**Psychosocial work factors** Psychosocial work factors were assessed by interview with items developed by the authors and Statistics Canada. All questions are included in the article	**Depression** Depression was assessed by interview using the world mental Health version of the Composite International Diagnostic Interview (WMH-CIDI) instrument	Relation of sources of stress to incidence of depression. 1994/95 to 1996/97 and 2001/01 to 2002/03. OR (95% CI), unadjusted **Women** Job strain – medium: 1.3 (0.8; 2.1) Job strain – high: 2.0 (1.3; 3.0), p<0.05 High personal stress: 2.8 (2.1; 3.7), p<0.05 Low co-worker support: 2.3 (1.6; 3.3), p<0.05 Low supervisor support: 1.3 (0.9; 2.0)* **Men** Job strain – medium: 1.3 (0.8; 2.0)* Job strain – high: 3.3 (1.9; 5.8), p<0.05 High personal stress: 1.3 (0.9; 2.0)* Low co-worker support: 1.4 (0.8; 2.3)* Low supervisor support: 1.5 (0.8; 2.7) Relation between transitions in job strain levels to depression in population free of depression in 1994/95. OR (95% CI), unadjusted **Depression in 2000/01 (no job strain=1)** *High job strain* 94/95-yes, 00/01-yes: 3.3 (2.1; 5.4), p<0.05 94/95-yes, 00/01-no: 1.5 (0.8; 2.7) 94/95-no, 00/01-yes: 3.2 (1.9; 5.1)*, p<0.05 **Depression in 2002/03 (no job strain=1)** *High job strain* 94/95-yes, 00/01-yes: 5.1 (2.9; 8.9), p<0.05 94/95-yes, 00/01-no: 2.1 (1.2; 3.8), p<0.05 94/95-no, 00/01-yes: 3.9 (2.0; 7.5), p<0.05 * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	Relation of sources of stress to incidence of depression. OR (95% CI), controlling for employment, occupation, working hours, shift work, self-employment, age, marital status, presence of children in household, household income, education, heavy drinking, low emotional support, smoking status, other three sources of stress and mastery **Women** Job strain – medium: 1.1 (0.7; 1.7) Job strain – high: 1.2 (0.8; 1.9) High personal stress: 2.0 (1.5; 2.7) Low co-worker support: 1.8 (1.2; 2.6), p<0.05 Low supervisor support: 1.0 (0.6; 1.4)* **Men** Job strain – medium: 1.2 (0.7; 2.0) Job strain – high: 2.9 (1.5; 5.4), p<0.05 High personal stress: 0.9 (0.6; 1.4) Low co-worker support: 1.1 (0.6; 1.8)* Low supervisor support: 1.2 (0.6; 2.3) Relation between transitions in job strain levels to depression in population free of depression in 1994/95. OR (95% CI), same adjustments as described above **Depression in 2000/01 (no job strain=1)** *High job strain* 94/95-yes, 00/01-yes: 2.4 (1.4; 4.2), p<0.05 94/95-yes, 00/01-no: 1.3 (0.7; 2.4) 94/95-no, 00/01-yes: 2.7 (1.6; 4.4), p<0.05 **Depression in 2002/03 (no job strain=1)** *High job strain* 94/95-yes, 00/01-yes: 3.4 (1.8; 6.4), p<0.05 94/95-yes, 00/01-no: 1.6 (0.9; 3.0) 94/95-no, 00/01-yes: 3.3 (1.8; 6.1), p<0.05 * Nb: Probably error in data (log values for upper and lower limits are not symmetric)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Shields 1999 [87] Canada **Study quality** Moderate	Prospective cohort. Part of the National Population Health Study 2 years General population (working) 1994/1995 and 1996/1997	Participants were randomly selected working persons aged 25–54 years n=3 830 1 649 women and 2 181 men	**Psychosocial work factors** Psychosocial work factors were assessed by interview with items developed by the authors and Statistics Canada. All questions are included in the article	**Major depressive episode** Major depressive episode was assessed by interview with items developed by the authors and Statistics Canada. Items were based on DSM criteria	Adjusted odds ratios relating selected characteristics to probability of major depressive episode. OR (95% CI) adjusted for occupation, self-employment, shift work, multiple jobs, high job strain, high job insecurity, low supervisor support, age, marital status, education, income, young children **Women** 35+ hours per week: 2.2 (1.1; 4.4), p<0.05 Shift worker: 2.3 (0.9; 6.0) High job strain: 2.1 (1.1; 4.0), p<0.05 High job insecurity: 1.0 (0.5; 1.9) Low supervisor support: 1.4 (0.7; 2.9) **Men** 35+ hours per week: 0.6 (0.3; 1.3)* Shift worker: 0.7 (0.3; 1.6) High job strain: 3.3 (1.3; 8.5), p<0.05 High job insecurity: 1.6 (0.7; 4.1)* Low supervisor support: 0.6 (0.0; 26.5)** * Nb: Probably error in data (log values for upper and lower limits are not symmetric) ** Nb: Probably error in data (lower confidence interval must exceed zero)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Sinokki et al 2009 [106] Finland **Study quality Comments** Moderate *Note*: the article also presents cross-sectional data on association between poor climate and depressive disorder	Prospective cohort. Part of the Finnish Health 2000 Study 3 years General population (working) 2000–2001	Participants were a random sample of Finnish employees aged 30–64 years. Mean age 45 years (women) and 44 years (men). Details of the sampling methodology are described in another publication n=3 347 1 684 women and 1 663 men	**Team climate** Team climate was assessed by self-questionnaire using a scale based on the Health Organization Questionnaire of the Finnish Institute of Occupational Health	**Use of antidepressant medication** Use of antidepressant medication was extracted from a national register on prescribed medication for outpatients, based on each participant's personal identification number. All prescriptions coded as N06A were extracted from 2001–2003	Odds ratio for antidepressant use by team climate at work. Crude OR (95% CI) **Team climate** Poor: 2.01 (1.44; 2.80) Intermediate: 1.11 (0.79; 1.56) Good: 1.00	Odds ratio for antidepressant use by team climate at work. OR (95% CI) adjusted for age, gender, marital status, occupational grade, self-reported lifetime mental disorders. DSM-IV mental disorders at baseline, job tenure, job demands and job control **Team climate** Poor: 1.53 (1.02; 2.30) Intermediate: 0.95 (0.65; 1.41) Good: 1.00

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Sinokki et al 2009 [103] Finland **Study quality** Moderate	Prospective cohort. Part of the Finnish Health 2000 Study 3 years General population (working) 2000–2001	Participants were a random sample of Finnish employees aged 30–64 years. Mean age 45 years (women) and 44 years (men). Details of the sampling methodology are described in another publication n=3 429 1 734 women and 1 695 men	**Social support** Social support was assessed by self-questionnaire using items from the Job Content Questionnaire by Karasek and Theorell	**Use of antidepressant medication** Use of antidepressant medication was extracted from a national register on prescribed medication for outpatients, based on each participant's personal identification number. All prescriptions coded as N06A were extracted from 2001–2003	Odds ratio for antidepressant use by level and source of social support. OR (95% CI) adjusted for age, gender, marital status, occupational grade, lifetime mental disorders and CIDI diagnoses at baseline **Support from supervisor** High: 1 Intermediate: 0.76 (0.43; 1.34) Low: 1.81 (1.23; 2.67) **Support from colleagues** High: 1 Intermediate: 1.63 (1.03; 2.60) Low: 2.02 (1.19; 3.44)	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Stansfeld et al 2012 [88] United Kingdom **Study quality** High	Prospective cohort. Part of the Whitehall II study 3 occasions over a 10-year period Civil servants 1988, 1989, 1991–93 and 1999	Participants were 35–55 years when initially enrolling in the cohort (1985–1988) and working in a London-based government civil service department. Retired participants were excluded. Age of participants was 45–64 years Data based on n=3 942 participants for whom completed data were available from all three occasions (10 308 participants at baseline) 6 895 women and 3 413 men at baseline	**Job strain, social support** Work characteristics were assessed by postal questionnaire using an adapted version of the Job Content Questionnaire Instrument by Karasek and Theorell	**Major depressive disorder** Major depressive disorder was assessed by postal questionnaire using the University of Michigan version of the CIDI adapted for self-administered computerized interview	OR of major depressive disorder at last follow-up by job strain and social support at previous phases. OR (95% CI). Analyses of repetition and change are adjusted for age and gender **Job strain at different occasions** *Phase 1 (low=1)* Medium: 1.19 (0.78; 1.82) High: 1.72 (1.16; 2.57) *Phase 2 (low=1)* Medium: 1.10 (0.70; 1.73) High: 1.67 (1.16; 2.67) *Phase 3 (low=1)* Medium: 1.32 (0.85; 2.06) High: 1.96 (1.28; 3.00) **Repeated job strain (non=1)** 1 occasion: 1.56 (1.03; 2.36) 2–3 occasions: 2.27 (1.53; 3.37) **Change in job strain (no change=1)** High to low: 1.56 (0.99; 2.48) Low to high: 1.77 (1.11; 2.81) High at two occasions: 2.12 (1.34; 3.34) **Work social support** *Phase 1 (low=1)* Medium: 0.99 (0.65; 1.51) High: 1.44 (0.98; 2.11) *Phase 2 (low=1)* Medium: 1.23 (0.79; 1.91) High: 1.52 (1.01; 2.29) *Phase 3 (low=1)* Medium: 1.18 (0.78; 1.81) High: 1.27 (0.83; 1.93) **Repeated work social support (non=1)** 1 occasion: 1.12 (0.74; 1.70) 2–3 occasions: 1.62 (1.11; 2.36)	Odds ratio of major depressive disorder at last follow-up (phase 5) by job strain and social support at previous phases of the study. OR (95% CI) adjusted for age, gender, employment grade, education, marital status, smoking habit, alcohol intake, physical activity, confiding and emotional support and social network. Analyses of repetition also adjusted for longstanding illness and GHQ questions at phases 1–3 **Repeated job strain (non=1)** 1 occasion: 1.28 (0.84; 1.95) 2–3 occasions: 1.49 (0.98; 2.27) **Change in job strain (no change=1)** High to low: 1.55 (0.97; 2.48) Low to high: 1.67 (1.04; 2.67) High at two occasions: 1.94 (1.22; 3.08) **Repeated work social support (non=1)** 1 occasion: 0.97 (0.64; 1.49) 2–3 occasions: 1.16 (0.77; 1.74)

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Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Stoetzer et al 2009 [105] Sweden **Study quality** High	Prospective cohort. Part of the Swedish PART Study 3 years General population (working) Exact years for measurements not specified in the article	Participants were Swedish employees aged 20–64 years who did not change their jobs between the two measurements of the study n=4 040 2 265 women and 1 775 men	**Social support and conflicts at work** Social support and conflicts at work were assessed by items formulated by the authors	**Depression** Depression was assessed by the Major Depression Inventory (MDI)	Relationship between interpersonal relationships problems at work measured at baseline and depression according to MDI at follow-up. OR (95% CI) adjusted for age **Women and men** Low social support: 2.3 (1.8; 2.9) Serious conflict at work: 2.2 (1.7; 2.8) Exclusion by superiors: 2.6 (2.0; 3.3)* Exclusion by co-workers: 2.6 (2.0; 3.4) **Women** Low social support: 1.9 (1.5; 2.5)* Serious conflict at work: 2.0 (1.5; 2.7) Exclusion by superiors: 2.5 (1.8; 3.3)* Exclusion by co-workers: 2.5 (1.8; 3.4) **Men** Low social support: 3.6 (2.2; 5.8) Serious conflict at work: 2.4 (1.4; 4.0) Exclusion by superiors: 3.4 (2.2; 5.4) Exclusion by co-workers: 2.3 (1.3; 4.0) * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	Relationship between interpersonal relationships problems at work measured at baseline and depression according to MDI at follow-up. OR (95% CI) adjusted for age, severe conflicts in family during childhood, financial situation, lacking a close friend or partner, severe life events, job demands, skill discretion, education and depression at baseline **Women and men** Low social support: 1.5 (1.1; 2.0) Serious conflict at work: 1.4 (1.1; 1.9) Exclusion by superiors: 1.6 (1.2; 2.1) Exclusion by co-workers: 1.7 (1.2; 2.3) **Women** Low social support: 1.3 (1.0; 1.8)* Serious conflict at work: 1.4 (0.9; 1.9) Exclusion by superiors: 1.6 (1.1; 2.2) Exclusion by co-workers: 1.7 (1.2; 2.3) **Men** Low social support: 2.2 (1.3; 3.9) Serious conflict at work: 1.5 (0.8; 2.8) Exclusion by superiors: 2.2 (1.3; 3.7) Exclusion by co-workers: 1.5 (0.8; 2.9) * Nb: log values for upper and lower limits are not symmetric

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Theorell et al 2012 [102] Sweden **Study quality** Moderate	Prospective cohort. Part of the SLOSH cohort 4 years study period, follow-up biannually General population (working) 2006, 2008 and 2010	Participants were gainfully employed people, aged 16–64 years from a Swedish labour force study. Individuals had been sampled in to the study through stratification by country of birth, sex, citizenship and inferred employment status. The stratified sample represented the full population of Sweden n=3 285 Both women and men participated in the study, but the number of men and women is not specified	**Leadership** Dimensions of leadership were assessed by self-questionnaire based on questions described in the article Non-listening leadership – "does your manager listen to you?" Self-centred leadership – "non-partici-pating", "asocial" and "loner"	**Depressive symptoms** Depressive symptoms were assessed by self-questionnaire using the Hopkins Symptom Checklist (SCL-90 by Lipmann, 1986). Focus was on items corresponding to the 6-item Hamilton Depression Scale (HAM-D by Bech, 2008)	Leadership variables in 2006 as predictors of depressive symptoms in 2008. Relative standardized linear beta coefficients (standard errors of mean). Results from multiple linear regressions. Age, gender, income, depressive symptoms in 2006 and emotional exhaustion in 2006 were also included in the equation. Without inclusion of psychological demands and decision latitude at work **Type of leadership** Self-centred: 0.179 (0.061), p=0.004 Non-listening: 1.573 (0.704), p=0.026	Leadership variables in 2006 as predictors of depressive symptoms in 2008. Relative standardized linear beta coefficients (standard errors of mean). Results from multiple linear regressions. Age, gender, income, depressive symptoms in 2006 and emotional exhaustion in 2006 were also included in the equation. With inclusion of psychological demands and decision latitude at work **Type of leadership** Self-centred: 0.132 (0.064), p=0.041 Non-listening: 0.715 (0.742), p=0.334

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wang et al 2011 [89] Canada **Study quality** Moderate	Prospective cohort. Part of the National Population Health Study 6 years General population (working) 2000–2001 and 2006–2007	Participants were 18–64 years who reported being employed in the preceding 12 months and who reported no major depressive episode at baseline. Mean age was 40 years n=6 008 2 812 women and 3 196 men	**Job strain** Perceived job strain was assessed by interview with a brief version of the Job Content Questionnaire by Karasek et al Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	**Major depressive episode** Major depressive episode was assessed by interview using the Composite International Diagnostic Interview Short Form for major depression (CIDI-SFMD) instrument Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	Incidence of major depression by psychosocial factors. OR (95% CI). Only the psychosocial factors (job strain, negative life events, daily stressors and childhood traumatic events) were included in the model. All models were adjusted by gender, age, marital status, education, employment status, self-rated health, and having one or more long-term medical conditions **Women and men** *Separate model* Job strain >1: 1.58 (1.25; 2.00) *Overall model* Job strain >1: 1.46 (1.15; 1.85) **Women** Job strain >1: 1.54 (1.17; 2.03) **Men** Job strain >1: 1.34 (0.87; 2.06)	–

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Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wang et al 2009 [90] Canada **Study quality** High	Prospective cohort. Part of the National Population Health Study 6 years General population (working) 1994–1995 and 2004–2005	Participants were 18–64 years who reported being employed in the preceding 12 months and who reported no major depressive episode at baseline. Mean age was 40 years n=4 866 2 233 women and 2 633 men	**Job strain** Perceived job strain was assessed by interview with a brief version of the Job Content Questionnaire by Karasek et al Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	**Major depressive episode** Major depressive episode was assessed by interview using the Composite International Diagnostic Interview Short Form for major depression (CIDI-SFMD) instrument Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	Incidence of major depression by perceived job strain levels. OR (95% CI) adjusted for gender, age, educational level, status of major depression from 1994/95 to 2000/01, perceived health status and childhood traumatic events Low job strain, no change: 1.00 High job strain, no change: 1.52 (1.00; 2.30) High to low job strain: 0.97 (0.61; 1.53) Low to high job strain: 1.60 (1.00; 2.57)	–

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Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wang 2005 [184] Canada	Prospective cohort. Part of the National Population Health Study	Participants were 18–64 years who reported being employed in the preceding 12 months and who reported no major depressive episode at baseline	**Work stress** Work stress was assessed by interview with a brief version of the Job Content Questionnaire by Karasek et al	**Major depressive episode** Major depressive episode was assessed by interview using the Composite International Diagnostic Interview Short Form for major depression (CIDI-SFMD) instrument	Logistic regression of work stress and major depressive episode. OR (95% CI) controlled for sociodemographic, clinical and psychosocial variables Work stress: 2.35 (1.54; 3.77)*, p<0.001 * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	–
Study quality High *Note:* Study not used for results since data probably are incorrect	2 years General population (working) 1994/1995 and 1996/1997	n=6 663 Both women and men participated in the study, but the number of men and women is not specified	Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone		

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wang 2004 [81] Canada **Study quality** High	Prospective cohort. Part of the National Population Health Study 6 years General population (working) Respondents were first interviewed in 1994/95 and then re-interviewed every two years	Participants were 18 years and older who reported being employed in the preceding 12 months and who reported no major depressive episode at baseline n=6 454–6 466 (varied somewhat between the work factors) Both women and men participated in the study, but the number of men and women is not specified	**Psychosocial work factors and physical exertion** Psychosocial work factors and physical exertion were assessed by interview with a brief version of the Job Content Questionnaire by Karasek et al Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	**Major depressive episode** Major depressive episode was assessed by interview using the Composite International Diagnostic Interview Short Form for major depression (CIDI-SFMD) instrument Baseline interviews were conducted face to face and follow-up interviews were conducted by telephone	Association between psychosocial work factors and incidence of major depressive episode. Crude OR (95% CI). For all factors "high stress" results are listed below, "low stress" results serving as reference values Skill discretion: 1.39 (1.16; 1.64), p<0.005 Decision authority: 1.18 (0.99; 1.43) Physical exertion: 1.09 (0.90; 1.28)* Psychological demands: 1.58 (1.31; 1.87)* Job insecurity: 1.54 (1.31; 1.82) Social support: 1.51 (1.29; 1.79) p<0.005 for each of the three factors above * Nb: Probably error in data (log values for upper and lower limits are not symmetric)	Association between psychosocial work factors and incidence of major depressive episode. OR (95% CI) adjusted for demographic, socioeconomic and psychosocial characteristics. For all factors "high stress" results are listed below, "low stress" results serving as reference values Skill discretion: 1.24 (1.04; 1.48), p<0.005 Decision authority: 1.04 (0.86; 1.27) Physical exertion: 1.08 (0.91; 1.29) Psychological demands: 1.33 (1.11; 1.63)* Job insecurity: 1.31 (1.09; 1.56) Social support: 1.31 (1.10; 1.55) p<0.005 for each of the three factors above * Nb: Probably error in data (log values for upper and lower limits are not symmetric)

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Varma et al 2012 [117] Denmark **Study quality** Moderate	Prospective cohort Health care personnel Work conditions were assessed in year 2008. Medication followed from 1995 to 2009	Participants were members of the Danish Association for Senior Medical Consultants. The majority of the consultants were specialist in internal medicine, followed by surgery and psychiatry. Mean age was 54 years n=2 790 813 women and 1 977 men All of the sample, except for 15 persons, were linked to a pharmaceutical register	**Weekly work hours** Weekly work hours were assessed by self-questionnaire developed by the authors (questions described in the article)	**Redemption of prescribed antidepressant drugs** Redeemed prescription of antidepressant drugs was taken as a proxy for clinical depression The sample of participants were linked to the Medicines Agency Register The following ATC codes were included: N06AA, N06AB, N06AX, N06AF, N06G and N06X	Cox regression analysis of work hours and redemption of antidepressive drug prescription. Crude HR (95% CI) **Work hours in intervals** 25–36 hours: 0.88 (0.27; 2.91) 37–40 hours: 1 41–44 hours: 1.15 (0.66; 2.02) 45–49 hours: 0.99 (0.53; 1.85) 50–54 hours: 0.95 (0.40; 2.19) 55–59 hours: 0.88 (0.26; 2.91) 60 hours and more: 0.42 (0.06; 3.11) **Work hours as a continuous variable** Work hours: 0.95 (0.80; 1.12) **Modifying effect of psychosocial variables** Work hours x decision authority at work x social support at work: 0.90 (0.70; 1.15) Work hours x quantitative work demands: 0.95 (0.75; 1.21)	Cox regression analysis of work hours and redemption of antidepressive drug prescription. HR (95% CI) adjusted for gender, age, marital status, medical specialty, decision authority at work, social support at work, quantitative work demands and previous redemption of antidepressive drug prescription **Work hours in intervals** 25–36 hours: 0.83 (0.24; 2.82) 37–40 hours: 1 41–44 hours: 0.95 (0.50; 1.77) 45–49 hours: 0.88 (0.43; 1.78) 50–54 hours: 0.83 (0.32; 2.14) 55–59 hours: 0.67 (0.15; 2.94) 60 hours and more: 0.48 (0.06; 3.68) **Work hours as a continuous variable** Work hours: 0.93 (0.76; 1.13)

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Weisskopf et al 2013 [140] France **Study quality** Moderate	Case-control Agriculture Year of information collection not specified. Participants were recruited 1998–2000	Participants were active or retired workers in agriculture and related occupations, recruited through their membership in a health insurance for such workers. Original study investigated pesticides and Parkinson´s disease (PD). PD patients 18–75 years of age were matched with up to 3 controls on age, sex and region of residence Participants with a record of free health care for dementia were not eligible n=567 232 women and 335 men	**Pesticide exposure** Pesticide exposure was assessed by a 2-phaese procedure; a self-reported occupational history and an interview of all who professionally used pesticides The interview was conducted by an occupational health physician who also visited the farms where subjects had worked. Data were reviewed by two occupational health physicians, two epide-miologists and an agronomist to check for consistency etc	**Treatment or hospitalization for depression** Outcome measure was assessed by interview by a physician	Hazard ratio for depression by professional exposure to different classes of pesticides among farmers. HR (95% CI) adjusted for age, region, Parkinson´s disease status, gender, cigarette smoking, age at end of schooling and history of head trauma with loss of consciousness **All subjects** Any pesticide: 1.36 (0.66; 2.79) Insecticide: 1.01 (0.62; 1.96) Fungicide: 1.15 (0.55; 2.41) Herbicide: 1.93 (0.95; 3.91) **Subjects free of Parkinson´s disease** Any pesticide: 1.38 (0.57; 3.38) Insecticide: 1.31 (0.59; 2.94) Fungicide: 1.48 (0.56; 3.93) Herbicide: 2.42 (1.00; 5.86) **Males only** Any pesticide: 1.22 (0.41; 3.62) Insecticide: 0.77 (0.31; 1.93) Fungicide: 1.10 (0.41; 2.92) Herbicide: 2.60 (0.94; 7.21) **Influence of exposure time** Those reporting the median 19 years or more of use of herbicide had a hazard ratio of 2.31 (1.05; 5.10) compared to non-users In trend analyses, the HR for 10 years of herbicide exposure was 1.34 (1.01; 1.76) and for 100 hours of herbicide exposure the HR was 1.25 (1.00; 1.55) No dose-response relationship was seen for insecticide or fungicides. However additional adjustment for these led to stronger results for duration and intensity of herbicide use	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wieclaw et al 2008 [73] Denmark **Study quality** High	Population based nested case-control study General population 14 166 cases and 58 060 controls Information on gender and age is not listed in the article	Participants had a job title and were registered as employed at the time of the study The study population was established by merging data from two national registers on psychiatry and labour market research Cases were selected among all patients in the psychiatry register aged 18–65 years who received a first diagnosis of affective (ICD-10, F30–39) disorder during 1995–1998 Using incidence density risk set sampling five never admitted references of the same sex and age were selected for each case	**Several psychosocial factors** Occupation was used as a proxy for exposure to psychosocial work conditions contained in a Job Exposure Matrix The Job Exposure Matrix was constructed from data carried by the Danish National Institute of Occupational Health. Data was based on telephone survey with a random representative population sample aged 18–69 years. The psychosocial variables were constructed based on international literature referred in the article. Contraction of the matrix is described in the article. Each person was assigned the mean value of the matrix exposure on the basis of his/her occupational title	**Affective disorder** Affective disorder was assessed by the first diagnosis made by a psychiatrist in charge of hospital outpatient treatment according to ICD-10, code F30–39	Incidence rate ratios of depressive disorder according to exposure to risk factors at work. IRR (95% CI) adjusted for marital status, having children, education, income, level of unemployment, residence and nationality **Women** *Job control (high=1)* Medium–high: 1.15 (1.02; 1.30) Medium: 0.93 (0.82; 1.07) Low: 0.95 (0.83; 1.10) *Job demands (low=1)* Medium: 1.20 (1.07; 1.35) Medium–high: 0.87 (0.77; 0.99) High: 0.89 (0.78; 1.02) *Job strain (no=1)* Yes: 1.01 (0.92; 1.12) *Emotional demands (low=1)* Medium: 0.94 (0.83; 1.07) Medium–high: 1.13 (0.99; 1.28) High: 1.39 (1.22; 1.58) **Men** *Job control (high=1)* Medium–high: 0.93 (0.80; 1.07) Medium: 0.98 (0.84; 1.13) Low: 1.05 (0.90; 1.21) *Job demands (low=1)* Medium: 0.92 (0.79; 1.06) Medium–high: 0.86 (0.74; 0.99) High: 0.88 (0.76; 1.02) *Job strain (no=1)* Yes: 1.01 (0.88; 1.17) *Emotional demands (low=1)* Medium: 1.02 (0.89; 1.18) Medium–high: 0.93 (0.80; 1.09) High: 1.12 (0.96; 1.30)	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Wieclaw et al 2006 [110] Denmark **Study quality** High	Population based nested case-control study General population 14 166 cases and 58 060 controls Information on gender and age is not listed in the article	The study population was established by merging data from two national registers on psychiatry and labour market research Cases were selected among all patients in the psychiatry register aged 18–65 years who received a first diagnosis of affective (ICD-10, F30–39) disorder during 1995–1998 Using incidence density risk set sampling five never admitted references of the same sex and age were selected for each case	**Threats and violence** Threats and violence were assessed by extracting data from the Danish work environment cohort study using a telephone survey with a random representative population sample	**Affective disorder** Affective disorder was assessed by the first diagnosis made by a psychiatrist in charge of hospital outpatient treatment according to ICD-10, code F30–39	Adjusted relative risk of affective disorder according to prevalence of occupational violence and threats. RR (95% CI) adjusted for marital status, having children, level of education, income level, total level of unemployment, residence and nationality **Women** *Threats (0%=1)* High (>20%): 1.48 (1.23; 1.79) Low (<20%): 1.14 (1.04; 1.26) *Violence (0%=1)* High (>14%): 1.45 (1.27; 1.65) Low (14%): 1.25 (1.03; 1.23)* **Men** *Threats (0%=1)* High (>20%): 1.17 (0.92; 1.48) Low (<20%): 1.07 (0.96; 1.19) *Violence (0%=1)* High (>20%): 1.48 (1.18; 1.86) Low (<14%): 1.03 (0.90; 1.18) * Nb: Probably error in data (upper confidence interval lower than point estimate)	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Virtanen et al 2012 [91] United Kingdom **Study quality** Moderate	Prospective cohort. Part of the Whitehall II study Average follow-up time was 5.8 years Civil servants 1991–1993 and 1997–1999	Participants were 35–55 years when initially enrolling in the cohort (1985–1988) and working in a London-based government civil service department. Retired participants were excluded. Mean age 47 years at baseline. Participants with psychiatric morbidity at baseline were excluded n=2 123 497 women and 1 626 men	**Psychosocial work factors** Work stress was operationalized as self-reported job demands, job control and social support at work. An indicator of job strain was formulated based on the definition by Karasek et al	**Major depressive episode** Presence of a major depressive episode in the preceding 12 months was ascertained during a clinical health examination using the University of Michigan version of the Composite International Diagnostic Interview (UM-CIDI) adapted for self-administered computerized interview	Association between factors and major depressive disorder at follow-up. OR (95% CI) adjusted for age and gender **Baseline covariates** *Job strain (low strain=1)* Active: 0.77 (0.37; 1.59), p=0.47 Passive: 1.39 (0.71; 2.71), p=0.34 High strain: 1.04 (0.46; 2.39), p=0.92 *Social support at work (high=1)* Intermediate: 1.41 (0.77; 2.56), p=0.26 Low: 1.11 (0.60; 2.06), p=0.73 **Working hours (per day) at baseline** 7–8 hours: 1 9 hours: 0.57 (0.26; 1.23), p=0.15 10 hours: 0.92 (0.45; 1.88), p=0.83 11–12 hours: 1.55 (0.75; 3.20), p=0.24	Association between working hours (per day) at baseline and major depressive disorder at follow-up. OR (95% CI) adjusted for age, gender, occupational grade, marital status, chronic physical disease, smoking, alcohol use, job strain and social support **Working hours (per day) at baseline** 7–8 hours: 1 9 hours: 0.66 (0.29; 1.48), p=0.31 10 hours: 1.27 (0.59; 2.72), p=0.54 11–12 hours: 2.52 (1.12; 5.65), p=0.025

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Virtanen et al 2011 [116] United Kingdom **Study quality** Moderate	Prospective cohort. Part of the Whitehall II study Approximately 5 years Civil servants 1997–1999, 2001, 2002–2004	Participants were 35–55 years when initially enrolling in the cohort (year 1985–1988) and working in a London-based government civil service department. Participants worked full time. Mean age 52 years at baseline. Participants had no depression symptoms and were free of anxiety symptoms at baseline n=2 960 712 women and 2 248 men	**Long working hours** Working hours were assessed using self-reported questionnaire with questions developed by the authors (described in the article)	**Depressive symptoms** Depressive symptoms were assessed using self-reported questionnaire based on the General health Questionnaire (GHQ-30 by Goldberg)	Association between working hours at baseline and incident depressive symptoms at follow-up. HR (95% CI) adjusted for age, gender, occupational grade, marital status at baseline and employment status at follow-up **Weekly working hours** *All participants* 35–40: 1 41–55: 1.03 (0.79; 1.35) >55: 1.65 (1.05; 2.59) *Women* 35–40: 1 41–55: 2.15 (1.28; 3.59) >55: 2.80 (1.13; 6.96) Per 10 h increase: 1.43 (1.16; 1.77) *Men* 35–40: 1 41–55: 0.75 (0.55; 1.02) >55: 1.30 (0.77; 2.20) Per 10 h increase: 1.03 (0.85; 1.26)	Association between working hours at baseline and incident depressive symptoms at follow-up. HR (95% CI) additionally adjusted for chronic illness, smoking and alcohol use at baseline **Weekly working hours** *All participants* 35–40: 1 41–55: 1.02 (0.78; 1.34) >55: 1.66 (1.06; 2.61) *Women* 35–40: 1 41–55: 2.15 (1.28; 3.60) >55: 2.67 (1.07; 6.68) Per 10 h increase: 1.40 (1.14; 1.73) *Men* 35–40: 1 41–55: 0.73 (0.53; 1.00) >55: 1.30 (0.77; 2.19) Per 10 h increase: 1.02 (0.83; 1.25)

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Virtanen et al 2010 [74] Finland **Study quality** Moderate	Prospective cohort 2 years Health care personnel 2003–2004	Participants were employees at special health care hospitals. They were registered nurses, licensed practical nurses and physicians with at least 12 month contracts. Individuals on long-term sick leave were excluded. Mean age was 41 years n=5 166 4 803 women and 363 men	**Excess bed occupancy** Bed occupancy was calculated by dividing the sum of inpatient days with the number of beds available. The rate at which a hospital ward is overcrowded is usually defined as 85% according to the article	**Sickness absence due to depressive disorders** Data on sickness absences were retrieved from a national register. ICD-10 codes F32–F23 were used for defining depressive disorders	Association between excess bed occupancy and future sickness absence due to depressive disorders. Crude HR (95% CI) No excess occupancy: 1 Excess occupancy ≤5%: 0.94 (0.62; 1.44) Excess occupancy >5–10%: 1.32 (0.82; 2.11) Excess occupancy >10%: 1.94 (1.14; 3.28)	Association between excess bed occupancy and future sickness absence due to depressive disorders. HR (95% CI) adjusted for gender, age, occupation, type and length of contract, district and specialty No excess occupancy: 1 Excess occupancy ≤5%: 0.99 (0.65; 1.50) Excess occupancy >5–10%: 1.44 (0.90; 2.30) Excess occupancy >10%: 1.95 (1.18; 3.24)

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Virtanen et al 2007 [79] Finland **Study quality** Moderate	Prospective cohort. Part of the Health 2000 study 3 years Working population Baseline measurements 2000–2001, data on medication collected 2003	Participants were 30 years and older. The population was representative to the Finnish population. Methods for sampling and stratification of the population sample are described in the article n=3 366 1 704 women and 1 662 men	**Several psychosocial factors** Psychosocial factors were self-assessed using an instrument based on the demand-control model by Karasek and Thorell	**Antidepressant medication** Data on antidepressant medication were obtained by a national register. Information on drug prescription was linked to the data by means of each participant's identification number. Data was extracted for prescriptions coded as N06A, which is the code for antidepressants	Change in probability of depressive or anxiety disorder per standard deviation increase in psychosocial factor; antidepressant use by work characteristics. OR (95% CI) adjusted for age, marital status, occupational grade, lifetime mental disorder and baseline DSM-IV depressive or anxiety disorder **Women** Job demands: 1.05 (0.89; 1.23) Job control: 0.98 (0.81; 1.20) Job strain: 1.09 (0.94; 1.26) **Men** Job demands: 1.30 (1.03; 1.62) Job control: 0.96 (0.73; 1.27) Job strain: 1.30 (1.08; 1.57) Job strain as a quadrant term associated with antidepressant use. OR (95% CI) adjusted for age, marital status, occupational grade and DSM-IV depressive or anxiety disorder at baseline **Women** Low strain: 1 Active: 1.20 (0.75; 1.92) Passive: 1.11 (0.65; 1.92) High strain: 1.16 (0.66; 2.04) **Men** Low strain: 1 Active: 1.63 (0.83; 3.18) Passive: 1.00 (0.40; 2.47) High strain: 1.95 (1.01; 3.78)	–

Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Ybema et al 2010 [108] The Netherlands **Study quality** Moderate	Prospective cohort. Part of the Study Health at Work (SHAW) 2 years Companies 2004–2006	Participants were gathered through an existing internet panel of a large market research organization. Panel participants who were employees were considered to be representative of the Dutch population of employees with regard to age, gender and branch of industry. Persons on sick leave during the follow-up time were excluded. Age 16–64 years, mean 39 years n=1 519 653 women and 866 men	**Justice** Justice was assessed by self-questionnaire. Distributive justice was assessed by items developed by Adams 1965. Procedural justice was assessed by items developed by De Boer 2002	**Depressive symptoms** Depressive symptoms were assessed by self-questionnaire based on the CES-D10 scale	Reciprocal causation model with longitudinal paths. Correlation between justice and depressive symptoms **Justice at baseline, symptoms at 1st follow-up[1]** Distributive justice: –0.04 Procedural justice: –0.07 **Justice at 1st follow-up, symptoms at 2nd follow-up[2]** Distributive justice: –0.04 Procedural justice: –0.07 [1] The first follow-up was one year after baseline [2] The second follow-up was two years after baseline	–

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Table 11.1 continued

Author Year Reference Country	Design Follow-up Setting Performed	Participants Women/men	Occupational factor(-s)	Outcome	Association between occupational factor and depression; least adjusted model	Association between occupational factor and depression; most adjusted model
Ylipaaval-niemi et al 2005 [70] Finland **Study quality** Moderate	Prospective cohort 2 years Health care 1998 and 2000	Participants were employees at 12 Finnish hospitals at baseline. Before the follow-up 1 567 respondents had lost or left their jobs n= 4 815 4 278 women and 537 men	**Psychosocial work factors** Job control was assessed by the decision latitude scale from the Job Content questionnaire by Karasek & Theorell. Job demands were assessed by a workload scale developed by the Finnish Institute of Occupational Health (Kivimäki et al, 1995). Job strain was assessed by assigning job demands and job control scales together Team climate was assessed by a short version (Kivimäki et al, 2001) of the Team Climate Inventory by Anderson et al, 1994. Justice was assessed by an instrument by Moorman, 1991	**Depression** Doctor-diagnosed depression was used to determine depression among the employees. The diagnosis was based on whether the subject reported that a doctor had confirmed the diagnosis Psychological distress was assessed at baseline by the General Health Questionnaire (GHQ) by Goldberg & Williams, 1988	Odds ratios (95% CI) of depression by levels of psychosocial factors after adjustment for age, gender and income **All participants** *Job control (high=1)* Intermediate: 0.82 (0.59; 1.17) Low: 1.00 (0.71; 1.41) *Job demands and strain (low=1)* Job demands, intermediate: 0.87 (0.62; 1.23) Job demands, high: 1.04 (0.75; 1.45) Job strain, high: 1.21 (0.88; 1.65) *Team climate and justice (high=1)* Team climate, intermediate: 1.16 (0.81; 1.67) Team climate, low: 1.58 (1.11; 2.24) Procedural, intermediate: 1.07 (0.74; 1.53) Procedural, low: 1.45 (1.03; 2.04) Relational, intermediate: 1.15 (0.81; 1.63) Relational, low: 1.39 (1.00; 1.96) **Excluding GHQ cases at baseline** *Job control (high=1)* Intermediate: 0.80 (0.51; 1.26) Low: 0.87 (0.56; 1.34) *Job demands and strain (low=1)* Job demands, intermediate: 0.64 (0.41; 1.00) Job demands, high: 0.93 (0.62; 1.40) Job strain, high: 0.86 (0.55; 1.36) *Team climate and justice (high=1)* Team climate, intermediate: 1.13 (0.72; 1.78) Team climate, low: 1.75 (1.13; 2.72) Procedural, intermediate: 0.97 (0.62; 1.50) Procedural, low: 1.14 (0.74; 1.77) Relational, intermediate: 1.16 (0.76; 1.78) Relational, low: 1.24 (0.80; 1.92)	Odds ratios (95% CI) of depression by levels of psychosocial factors after adjustment for age, gender, income and life style factors (high alcohol consumption, current smoking, sedentary life style and obesity) **All participants** *Job control (high=1)* Intermediate: 0.87 (0.60; 1.24) Low: 1.01 (0.70; 1.46) *Job demands and strain (low=1)* Job demands, intermediate: 0.92 (0.64; 1.32) Job demands, high: 1.13 (0.80; 1.58) Job strain, high: 1.27 (0.92; 1.76) *Team climate and justice (high=1)* Team climate, intermediate: 1.12 (1.07; 1.63) Team climate, low: 1.55 (1.07; 2.22) Procedural, intermediate: 1.05 (0.73; 1.51) Procedural, low: 1.29 (0.90; 1.84) Relational, intermediate: 1.17 (0.81; 1.69) Relational, low: 1.43 (1.00; 2.03)

BMI = Body mass index; CI = Confidence interval; HR = Hazard ratio; IRR = Incidence rate ratio; OR = Odds ratio; RR = Relative risk; SE = Standard error