Bilaga 3 Tabellerade studier/Appendix 3 Characteristics of included studies

Aasdahl et al. 2018

Author	Aasdahl et al.
Year	2018
Country	Norway
Reference	[1]
Study design	RCT
Setting	Inpatient multimodal rehabilitation as compared to outpatient Acceptance and commitment therapy.
Recruitment	Individuals were identified and invited (n=3 318) by the Norwegian Labour and Welfare Service between October 2012 and November 2014. Respondents who accepted the invitation (n=275) underwent an outpatient pre-screening, and n=168 were randomised.
Population	Persons aged 18-60 years old sick listed for 2-12 months with a diagnosis within the musculoskeletal, psychological, or general and unspecified chapters of International Classification of Primary Care (ICPC-2). Age (mean, SD): Inpatient program = 45.0 (8.7) years; Outpatient program = 45.1 (9.6) years Female (%): Inpatient program 77 %; Outpatient program = 82 % Sick leave (full): Inpatient program = 45 %; Outpatient program = 46 % Sick leave (partial): Inpatient program = 49 %; Outpatient program = 47 %
Follow-up	6 and 12 months
Intervention	Inpatient program The inpatient program consisted of several components: group-based cognitive therapy, individual and group-based physical training, mindfulness, psychoeducation on stress and meeting with coordinators for problem solving and creating RTW plan. Intervention lasted for 4 full days in week 1 and week 4 with some contact with coordinators in-between week 1 and 4.
Participants (n)	92
Drop-outs (n, %)	74 (80 %) completed program; 92 (100 %) analysed.
Comparison	Outpatient program

	Consisted primarily of one component: group-based acceptance and commitment therapy (ACT), once a week (2.5-hour sessions) for 6 weeks. Participants were in addition offered 2 sessions with social worker experienced in occupational rehabilitation and ACT.
Participants (n)	76
Drop-outs (n, %)	63 (83 %) completed program; 76 (100 %) analysed
Statistical analysis /adjustments	ITT-analysis. Cox proportional hazard regression, crude and adjusted for gender, age, level of education, main diagnosis for sick leave, and length of sick leave after inclusion. Mann-Whitney U for number of sick leave days.
Outcomes	Number of sick absence days at 12 months. Time to successful RTW defined as 1 month without relapse.
Missing data	-
Results	12 months: Sick Absence Days, median (IQR) Inpatient program: 114 (IQR 46-172) Outpatient program: 96 (IQR 35-175), test of significance: p=0.403 12 months: Sustainable Return to Work Inpatient program: 45 (49 %) Outpatient program: 43 (57 %) Crude HR for RTW: 0.74 (95 % CI 0.48-1.32), adjusted HR 0.72 (95 % CI 0.46-1.11)
Risk of bias	RTW outcome: Moderate Secondary outcomes (published in separate publication Aasdahl 2017 [2] on pain, anxiety and depression not tabulated due to high risk of bias.
Comments	Similar to the study by Gismervik et al. 2020 [3], but with shorter intervention time.

Abasolo et al. 2005

Author	Abasolo et al.
Year	2005
Country	Spain
Reference	[4]
Study design	RCT
Setting	Primary care in three health districts in Madrid.
Recruitment	All patients with musculoskeletal disorders-related temporary work disability in three health districts in Madrid were recruited during 1998 and 1999.
Population	Patients having a temporary work disability with an MSD-related cause reported by the primary care physician. The MSD-related causes included all arthropathies, connective tissue disorders, back disorders, soft-tissue rheumatisms, bone and cartilage disorders, musculoskeletal pain not caused by cancer, and nerve entrapment syndromes.
Follow-up	Age (mean): Intervention group = 40.0 years; Control group = 40.0 years. Female (%): Intervention group 51.7 %; Control group 51.9 %. 12 months
Intervention	A population-based clinical program including 3 main elements; education, protocol-based clinical management, and administrative duties. The program was administered by rheumatologists and care was delivered during regular visits.
Participants (n)	5 272
Drop-outs (n, %)	0 (0 %)
Comparison	Standard primary care management
Participants (n)	7 805
Drop-outs (n, %)	0 (0 %)
Statistical analysis /adjustments	ITT-analysis. Baseline group differences were tested with the student t-test. Number of episodes of temporary work disability was tested with the Mann-Whitney U test. Chi-square analysis was used to test the distribution of proposals for permanent work disability between the groups. Kaplan-Meier curves were set to account for correlation in duration of temporary work disability within patients. Cox regression analyses were used to adjust variables unevenly distributed between groups at baseline.
Outcomes	**RTW** Episodes of musculoskeletal disorders-related temporary work disability defined as: 1) The duration of all episodes of MSD-related temporary work disability 2) The number of episodes of MSD-related temporary work per patient 3) The number and outcome of proposals for permanent work disability.
Missing data	0 %

Results	Primary (RTW) **Short-term efficacy of the program:** Mean duration of episodes of Temporary Work disability Intervention group 26 days Control group 41 days p<0.001 **Long-term efficacy of the program:** Patients proposed for permanent work disability n (%) Intervention group 59 (1.1) Control group 170 (2.2) p<0.005 **Cost-benefit analysis** Result presented as amount saved per amount invested. Every dollar invested in the program produced savings between 8 USD and 20 USD at the end of the second year. **"Cost-efficacy analysis"** Results presented as amount needed to save 1 day of temporary work disability. To save 1 day of temporary work disability 4-8 USD had to be invested in the program. Costs reported in USD year 2003.
Risk of bias	Moderate
Comments	The methodological quality of the health economic analysis within this study was assessed as moderate and the transferability to the Swedish setting was assessed as moderate. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Anema et al. 2007 and Steenstra et al. 2006

Author **Year** **Country** **Reference**	Anema et al. 2007 The Netherlands [5]
Author **Year** **Country** **Reference**	Steenstra et al. 2006 The Netherlands [6] (this publication contains data from 6-month follow-up and is not tabulated)
Study design	RCT (Partly cluster randomisation with first randomisation on level of occupational physician, subsequent randomisation on patient level for workers not returning to work within 8 weeks).
Setting	Occupational Health Services and physiotherapy centers with occupational physicians, ergonomists, and physiotherapists. The actual intervention took place at the participants´ workplace and physiotherapy centers.
Recruitment	From patients of the participating occupational physicians. (In the Netherlands sick-listed workers visit their occupational physician). Recruitment period: October 2000 until October 2002.
Population	Nonspecific low back pain. Sick leave for 2-6 weeks. Age 18-65 years. Mean age (SD): Workplace intervention = 44.0(8.6). Control group = 41.2(10.7). Females (%) overall: 57 Females (%): Workplace intervention= 47, control group= 67. Sick leave, n (partial/full): Workplace intervention=20/76. Control group=35/65. (For patient not returning to work within 8 week a second randomisation was performed: Mean age (SD) in Graded activity group= 41.3(9.2). Mean age in control group= 43.4(8.3). Females (%) in Graded activity group=66. Females in control group= 54. Sick leave (partial/full) in Graded activity group=17/36. Control group=12/4).
Follow-up	12, 26 and 52 weeks.
Interventions	Workplace intervention: assessment and adjustment of the workplace based on participatory ergonomics. The worker, employer, occupational physician, and the worker´s general practitioner participate in the process. (Randomisation at the level of the occupational physician. The intervention took place directly after inclusion). Graded activity: an individual, submaximal, gradually increasing exercise program with a physiotherapist acting as coach and supervisor, using a hands-off approach. A maximum of 26 sessions, 1 hour twice a week. The program stopped if a lasting return to work was achieved. The

	intervention was assigned to workers in all groups (after randomisation) that did not return to work within eight weeks.
Participants (n)	Workplace intervention: 96 Graded activity: 55 (27 had received the workplace intervention, the remaining was from the usual care group).
Drop-outs (n, %)	Drop-outs from workplace intervention: 10 (10 %) (did not receive intervention). Graded activity: 19 (35 %) (did not receive intervention).
Comparison	Usual care: According to the Dutch occupational guideline on low back pain advices for nonspecific low back pain (education about the good prognosis and importance of returning to normal activities, coping with low back pain and planning for return to normal activities if appropriate, advice to return to work within two weeks in the absence of further problems, temporary work adjustments (optional visit by ergonomist or occupational physician), if curative treatment is considered inappropriate a medical specialist should be consulted.
Participants (n)	100 from first randomisation. 57 from second randomisation of patients not returning to work within 8 weeks, of these 32 were previously in the control group and 25 in the workplace intervention group. (A total of 100+32=132 were assigned to the control group at both randomisations).
Drop-outs (n, %)	0
Statistical analysis /adjustments	Intention-to-treat principle with patient level data. Baseline data was checked for similarity: significant differences with respect to age and gender. Intraclass correlation coefficients were estimated to check for independency between occupational physicians (first randomisation was performed on this level): no dependency was found. The primary outcome was analysed with survival analysis with log-rank test for number of days off work, and Cox regression to obtain hazard ratios of return-to-work rates for the different groups. Adjustments in the cox regression: time-dependent covariates to adjust for different timing of interventions, adjustment for significant confounders (significant baseline groups differences or prognostic factors known from the literature). Interactions between active interventions were tested, and between interventions and confounders. Secondary outcomes (pain and function) were analysed with longitudinal analysis of covariance to assess differences in improvement between groups. The coefficients of the covariance were estimated with random coefficient analysis. The baseline value of the particular outcome was used as covariates in the model. The effect difference between groups was defined as the regression coefficient derived from of the applied model.
Outcomes	Primary: Sick leave due to low back pain (primary). Presented as hazard ratio between workplace intervention compared to no workspace intervention (adjusted graded activity, worker´s functional status and job control), graded activity compared to no graded activity (adjusted for workplace

	intervention, worker´s functional status and job control) and combined intervention compared to no combined intervention (adjusted for workspace intervention, graded activity, worker´s functional status and job control). Median number of days off work in the different groups, and log-rank tests for significant differences were also presented. Secondary: Pain. Presented as mean improvement from baseline (after 12 month) and difference in effect between groups. Pain intensity was measured on a 10-point visual analogue scale. Secondary: Function. Presented as improvement from baseline (after 12 month) and difference in effects between groups. Function status was measured by the Roland-Morris Disability Questionnaire.
Missing data	Follow-up data for the primary endpoint were collected for all patients. For the secondary endpoint follow-up data from 24 (12 %) could not be collected.
Results	RTW: HR Workplace intervention: No workplace intervention (95 % confidence interval) (p value): 1.7 (1.2 – 2.3) (p=0.003) in favour of group with workplace intervention (adjusted analysis). HR Graded activity: no graded activity (95 % confidence interval) (p value): 0.4 (0.3 – 0.6) (p<0.001) in favour of group without graded activity (adjusted analysis). HR Combined intervention: no combined intervention (95 % confidence interval) (p value): 0.7 (0.3 – 1.2) (p>0.05) (adjusted analysis). Time until full and lasting RTW for workplace intervention group, median (IQR): 77 (56 – 126) days Time until full and lasting RTW for no workplace intervention group, median (IQR): 104 (56 – 166) days (Log rank (P) between above groups: 0.02) Time until full and lasting RTW for graded activity group, median (IQR): 144 (113 – 233) days Time until full and lasting RTW for no graded activity group, median (IQR): 111 (74 – 153) days (Log rank (P) between above groups: 0.03) Time until full and lasting RTW for combined interventions, median (IQR): 143 (108 – 250) days Time until full and lasting RTW for no combined interventions, median (IQR):126 (83 – 171) days (Log rank (P) between above groups: 0.49) Pain: Mean improvement (SD) for Workplace group: 3.3 (2.6) Mean improvement (SD) for No Workplace group: 2.9 (2.7) Effect between above groups (regression coefficient (CI): -0.20 (-0.75 – 0.35). Adjusted for baseline value of the outcome measure, effect of graded activity, gender, levels of occupational physician and time. Mean improvement (SD) for Graded activity: 2.7 (2.6) Mean improvement (SD) for No Graded activity: 3.7 (2.6)

	Effect between above groups (regression coefficient (CI): 0.67 (-0.05 – 1.38). Adjusted for baseline value of the outcome measure, effect of workplace intervention, gender, levels of occupational physician and time. Mean improvement for combined interventions: 2.9 (2.6) Mean improvement for No combined interventions: 3.3 (2.6) Effect between above groups (regression coefficient (C): 0.47 (-0.42 – 1.35). Adjusted for baseline value of the outcome measure, gender, levels of occupational physician and time. Function: Mean improvement (SD) for Workplace group: 9.0 (6.2) Mean improvement (SD) for No Workplace group: 8.1 (5.7) Effect between above groups (regression coefficient (CI): -0.25 (-1.57 – 1.06). Adjusted for baseline value of the outcome measure, effect of graded activity, gender, levels of occupational physician and time. Mean improvement (SD) for Graded activity: 7.3 (6.2) Mean improvement (SD) for No Graded activity: 9.9 (6.1) Effect between above groups (regression coefficient (CI)): 1.74 (0.07 – 3.42). Adjusted for baseline value of the outcome measure, effect of workplace intervention, gender, levels of occupational physician and time. Mean improvement for combined interventions: 8.3 (7.9) Mean improvement for No combined interventions: 8.7 (6.0) Effect between above groups (regression coefficient (CI): 1.49 (-0.03 – 3.31). Adjusted for baseline value of the outcome measure, gender, levels of occupational physician and time.
Risk of bias	RTW outcome: Moderate (borderline between Low – Moderate) Pain and functioning: Moderate
Comments	Steenstra et al. 2006 [7] from the same study also reports RTW and secondary data at 12 months, along with health economic results. See separate table below.

Arends et al. 2014

Author	Arends et al.
Year	2014
Country	The Netherlands
Reference	[8]
Study design	Cluster-randomised controlled parallel group trial
Setting	Intervention by occupational physicians (OP).
Recruitment	Between January 2010 and June 2011 253 OPs were randomised to deliver intervention or control. Of this 154 were trained/received information and a total of 212 patients were included in either SHARP-at work intervention (n=80) or care as usual (CAU) (n=78).
Population	Persons aged 18-63 years old, employed in paid job, new episode of sick leave due to a common mental disorder (CMD) diagnosis. Majority with adjustment disorder. Age (mean, SD): SHARP program = 41.3 (9.4) years; CAU = 43.3 (9.8) years Female (%): SHARP program 66 %; CAU = 51 %
Follow-up	3, 6 and 12 months, high attrition
Intervention	SHARP-at work intervention Five step problem solving process including making action plan with supervisor, supported by OP. Make inventory of problem Brainstorm solutions Write down solutions and support needed Discuss with supervisor and make action plan Evaluate plan and implement solutions
Participants (n)	80
Drop-outs (n, %)	23 (29 %) at 12-month follow-up, administrative data on RTW evaluated for 72 (90 %).
Comparison	Care as usual OPs were supposed to deliver care as usual according to existing guidelines, which does not involve a structured approach for preventing recurrent sick absence.
Participants (n)	78
Drop-outs (n, %)	28 (35 %) at 12-month follow-up, administrative data on RTW evaluated for 75 (96 %).

Statistical analysis /adjustments	Cox proportional hazard regression Difference in incidence of recurrent sickness absence assessed with multilevel longitudinal regression including random intercepts for OP-level and patient level, crude and adjusted for age, sex, educational level, mental health complaints and days of sickness absence at baseline.
Outcomes	Recurrent sick absence and time to recurrent sickness absence.
Missing data	10 % in SHARP and 4 % in CAU
Results	Recurrent sickness absence Adjusted OR for recurrent sickness absence SHARP compared to CAU: OR 0.40 (0.20 to 0.81) Time to first recurrent sickness absence Adjusted HR for time to recurrent sickness absence SHARP compared to CAU: HR 0.53 (0.33 to 0.86)
Risk of bias	RTW outcomes: Moderate Secondary outcomes on pain, anxiety and depression not tabulated due to high risk of bias.
Comments	

Bakker et al. 2007

Author	Bakker et al.
Year	2007
Country	The Netherlands
Reference	[9]
Study design	Cluster-randomised trial
Setting	Primary health-care practices
Recruitment	Forty-six primary care physicians (of 139 approached) were randomised to either receive training in Minimal Intervention for Stress-related mental disorders with Sick-leave (MISS) or to provide usual care (UC). Between September 2003 and October 2004, eligible patients were screened by email. A total of 433 patients (1.9 % of the source population) were included.
Population	Patients with sick leave (no longer than 3 months) and self-reported elevated level of distress, depression, anxiety, or somatisation Age (mean, SD): I = 41.97 (8.8) years; C = 39.50 (9.6) years Female (%): I = 67 %; C = 65 % All participants were on sick leave at baseline (full/partial not specified)
Follow-up	At 2, 6 and 12 months
Intervention	Minimal Intervention for Stress-related mental disorders with Sick-leave (MISS) Physicians were trained (total 11 h) to use specific methods of communication to help the patient, within three consultations, to functional recovery. Skills taught: to diagnose a stress-related mental disorder (SMD) and detect signs of depression and anxiety; to give information about the importance of the patient's active role; to give advice on functional rehabilitation; to actively monitor patient's efforts to translate the work situation into a problem that could be solved; to consider referral to specialised care in case of no progress.
Participants (n)	227
Drop-outs (n, %)	44 (19 %) at 12 months
Comparison	Usual care (UC) Guidelines for physicians providing usual care were available for the treatment of depression and anxiety, but not for SMD.
Participants (n)	206
Drop-outs (n, %)	47 (23 %) at 12 months
Statistical analysis /adjustments	Primary: Cox proportional hazard regression, adjusted for clustering effect of PCPs Secondary: Linear mixed models, adjusted for age (analysis of distress, depression, anxiety) or age and level of education (analysis of somatisation)
Outcomes	-Lasting full return to work: calendar days from the first day of sick leave until full (not part-time) return to work, lasting for at least 4 weeks without partial/full relapse into sick leave (self-reported in telephone interviews)

Missing data **Results**	Symptoms of distress, depression, anxiety, and somatisation: Four-Dimensional Symptom Questionnaire (4DSQ) (self-reported in emailed questionnaire) Primary outcome: MISS 19 %, UC, 23 % Secondary outcomes: MISS 26 %, UC, 32 % RTW: **Time to RTW, median number of days of sick leave before lasting full RTW (95 % CI)** MISS: 96 (81 to 111) days UC: 102 (75 to 182) days p=0.562 **Hazard ratio for days of sick leave before lasting full RTW, MISS compared to UC** Crude HR: 1.06 (95 % CI 0.87 to 1.29) Secondary (at 12 months) **Distress, mean (SD) (4DSQ score range 0-32; elevated level: score >10)** MISS: 10.81 (8.91) UC: 10.49 (8.64) F = 1.213 (p = 0.304) **Depression, mean (SD) (4DSQ score range 0-12; elevated level: score >2)** MISS: 1.74 (2.92) UC: 1.89 (3.04) F = 0.332 (p = 0.802) **Anxiety, mean (SD) (4DSQ score range 0-24; elevated level: score >7)** MISS: 2.83 (4.55) UC: 3.14 (4.54) F = 0.8990 (p = 0.441) **Somatisation, mean (SD) (4DSQ score range 0-32; elevated level: score >10)** MISS: 8.34 (6.67) UC: 9.00 (6.96) F = 1.295 (p = 0.275) (One-year data on % above thresholds for elevated level also available, not tabulated here)
Risk of bias	Self-reported RTW: Moderate Self-reported distress, depression, anxiety, and somatisation: Moderate
Comments	Subgroup analyses according to diagnosis from medical records (SMDs, other health problems, somatic problems) are also reported, but not tabulated here.

Björkelund et al. 2018

Author	Björkelund et al.
Year	2018
Country	Sweden
Reference	[10]
Study design	Pragmatic cluster-randomised trial
Setting	Primary care
Recruitment	Between December 2014 and January 2016 192 patients were included at the interventions 23 primary care centers. Randomisation was performed on primary care center level to implement a care manger or not.
Population	Persons aged over 18 years diagnosed with a new (<1 month) mild or moderate depression (according to Montgomery-Åsberg Depression Rating Scale Self-assessment MADRS-S, <35). Age (mean, SD): Intervention program = 40.8 (15.0) years; CAU = 41.6 (15.4) years Female (%): Intervention program 68 %; CAU = 74 %
Follow-up	6 months
Intervention	Intervention group Care manager that created individual plan with patient and had telephone contacts (at least 6-8) over 12-week period using patient centered communication.
Participants (n)	226 invited; 30 did not meet inclusion criteria; 4 declined: 192 received allocated intervention.
Drop-outs (n, %)	16 (8 %) discontinued intervention during follow-up. 192 analysed.
Comparison	Care as usual Care as usual according to standard protocols and procedures. According to guidelines persons with depression or anxiety should receive high accessibility, continuity, psychotherapy and or antidepressants in stepped care model.
Participants (n)	212 invited as control patient; 23 did not meet inclusion criteria; 5 declined: 184 participated as control patient.
Drop-outs (n, %)	8 (4 %) discontinued as control patient during follow-up. 184 analysed.
Statistical analysis /adjustments	Chi 2- tests, t-tests, Mann-Whitney U-tests.
Outcomes	Return to work, likely measured by dichotomous measure of sick leave or not, from patient records for 4-6 months. Self-rated depression using MADRS-S and BDI II-scales. Quality of life (QoL) using EQ-5D.
Missing data	Lost to follow-up in intervention group 29 (15 %) and 5 (3 %) in control group
Results	**Return to work at 6 months:**

	On sick leave: Intervention group 40.1 % (59/147) Control group 42.1 % (64/152), p=0.73 for comparison Return to work Intervention group 33 % (7) Control group 33 % (10), p=1.0 for comparison **Mean reduction in depression scores at 6 months:** MADRS-S: 2.27 lower (95 % CI 0.56 to 3.95) BDI II: 1.96 lower (95 % CI -0.19 to 4.11) **Remission depression (MADRS-S):** Intervention 67 %, control 47 %, p=0.001 **QoL:** Increase in unadjusted means of EQ-5D, non-significant between groups at 6 months.
Risk of bias	RTW: Moderate for all reported outcomes
Comments	Return to work likely based on sick leave status according to patient records, outcomes of RTW note that relevant assessed during 4-6 months of the intervention. Mean reduction in depression scores likely not clinically relevant.

Björneklett et al. 2013

Author	Björneklett et al.
Year	2013
Country	Sweden
Reference	[11]
Study design	RCT
Setting	Support program after adjuvant therapy in addition to standard follow-up at the department of surgery or oncology.
Recruitment	Recruitment during treatment with radiotherapy. Recruitment period: April 2002 until November 2007.
Population	Women with a newly diagnosed primary breast cancer Age (mean): Intervention group = 57.8 years; Control group = 58.7 years Female (%): 100 % Sick leave (%): Intervention group = 64.5 %, Control group = 63.7 %
Follow-up	2, 6 and 12 months
Intervention	A seven-day stay at a resort where the participants took part in a support program. Two months after the initial visit the participants took part in a four-day follow-up. The program was information-based supplemented with relaxation, qigong and liberating dance.
Participants (n)	191
Drop-outs (n, %)	Drop-outs before intervention n=12 and drop-outs after intervention n=5
Comparison	Standard follow-up routines at the Department of Oncology or Surgery.
Participants (n)	191
Drop-outs (n, %)	Drop-outs after randomisation n=10 and drop-outs during the first-year n=6
Statistical analysis /adjustments	Differences between the groups were tested with Pearson´s X^2-test for the categorical variables. The Mann-Whitney test was used for discrete variables and for not normally distributed continuous variables.
Outcomes	Sick leave and health care utilisation, both self-reported
Missing data	Response rates: Baseline 92 %, two months 88 %, six months 84 % and at 12 months 81 %
Results	<u>Primary (RTW)</u> **Sick leave at 12 months** Mean days on sick leave (chemotherapy): Intervention group = 154.8 (153.4) days; Control group = 123.3 (148.8) days, p-value=0.319 Mean days on sick leave (not chemotherapy): Intervention group = 49.0 (100.8) days; Control group = 40.0 (87.7) days p=0.399 <u>Secondary</u> **Health care utilisation at 12 months**

	There was no statistically significant difference between the groups regarding the number of visits to medical specialists, general practitioners, or physiotherapists. Women in the intervention group consulted other health care providers more often than women in the control group. Mean visits general practitioners**:** Intervention: 1.4394 (2.30136) visits: Control: 1.1311 (1.727) visits, p-value 0.603 Mean visits hospital specialist**:** Intervention: 1.952 (2.524) visits: Control: 1.475 (2.48) visits, p-value 0.079 Mean visits physiotherapists**:** Intervention: 2.6154 (4.09532) visits: Control: 2.0333 (3.77308) visits, p-value 0.015 Mean visits other health care provider**:** Intervention: 1.2926 (3.09982) visits: Control: 0.25 (1.49241) visits, p-value 0.015
Risk of bias	Self-reported sick leave: Moderate Self-reported health care utilisation: Moderate
Comments	The study also included health economic data. This was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Brattberg et al. 2007

Author	Brattberg
Year	2007
Country	Sweden
Reference	[12]
Study design	RCT
Recruitment	Through advertisements in local newspaper in Southern Sweden
Population	Patients complete or partially on sick leave for 6 months due to chronic pain and burnout Age (mean, SD): I = 47.4 (8.1) years): C = 47.4 (8.1) years Female (%): I = 88 %; C = 88 %
Follow-up	12 months
Intervention	Rehabilitation program consisting of 19 films (30-60 min in length) of authentic group discussions in a support group for individuals with chronic pain and burnout. One film was presented every week and the participant were asked to reflect. All films and texts were presented on a website and available when it suited the participant. The participants discussed their thoughts in a discussion forum on the internet. The program leader and another person participated in the discussions.
Participants (n)	30
Drop-outs (n, %)	n= 5, 16 %
Comparison	Waiting list
Participants (n)	30
Drop-outs (n, %)	N=5, 16 %
Statistical analysis /adjustments	ANOVA and x2 test were used to analyse the outcomes. The x2 test was used to compare the groups with respect to the number of individuals with an increased work capacity.
Outcomes	Health survey (SF-36 Health Questionnaire) and the Hospital Anxiety and Depression Scale. Increased work capacity was defined as an increase in the number of hours worked per week, or the intention of work training after a long period on sickness benefit.
Missing data	Not willing to participate. However, 5 answered some questions through a phone call
Results	**Work capacity, increased numbers of hours worked per week at 12 months follow-up:** Intervention: 52 % Control: 13 % P for comparison: 0.007 **Proportion on sickness benefits at follow-up:** Intervention: 48 %

	Control: 68 %, no statistical test performed **Anxiety, mean (SD) at 12 months follow-up:** Intervention: 6.5 (4.4), n=25 Control: 7.8 (4.6), n=25 n.s. **Depression, mean (SD) at 12 months follow-up:** Intervention: 6.7 (3.8), n=25 Control: 7.8 (4.8), n=25 n.s.
Risk of bias	Risk of bias work capacity: Moderate Risk of bias anxiety: Moderate Risk of bias depression: Moderate
Comments	

Brendbekken et al. 2017 and Brendbekken et al. 2018

Author	Brendbekken et al.
Year	2017, 2018
Country	Norway
Reference	[13] [14]
Study design	RCT
Setting	Outpatient clinics (different for the compared interventions).
Recruitment	All patients from two different counties in the south–eastern part of Norway, sick-listed for musculoskeletal pain and referred by their normal GP to the DPMR between 2011 and 2013, were considered for participation.
Population	Condition: musculoskeletal pain. The dominant diagnoses in accordance with ICPC-2 were low back pain L02/L03/L84/L86 (39.5 %), neck pain L01/L83 (12.1 %), widespread pain/fibromyalgia L18 (10.7 %) and shoulder pain L08/ L92 (7.8 %). N=284 Age: mean (SD): T: 41.3; MI: 40.9 (9.8); BI: 41.6 (9.5) Sex (% women): T: 53.9; MI: 54.6; BI: 53.1 Sick leave, mean (SD): ≥50 % for <12 months, mean 147 days (SD 60.1) • Part-time: N (%): MI: 51 (36.2); BI: 52 (36.4) • Full-time: N (%): MI: 85 (60.4); BI: 85 (59.2) Employment: at least 50 % employment contract
Follow-up	Monthly, up to 12 months, 24-month
Intervention	MI included 3 consultations with a team consisting of a social worker, a physician, and a physiotherapist. At baseline the social worker assessed participants work situation, family life, social life, education and economics, the physician interviewed the participant about their past and present health, the health of their family, conducted a physical exam, and set relevant diagnoses (ICD-10), and a physiotherapist assessed the participant's musculoskeletal problems and conducted a physical examination. The participant's resources and challenges were visualised using the Interdisciplinary Structured Interview and a Visual Educational Tool (ISIVET), which served as the foundation for a personalised rehabilitation plan. Consultations at 2 weeks and 3 months involved working through the ISIVET once more, leading to an evaluation and, eventually, adjustment of the rehabilitation plan. The total face-to-face-time spent with the patient during the MI was 5.5 h.
Participants (n)	n = 141
Drop-outs (n, %)	n = 7 (5 %)
Comparison	BI involved 2 sessions: a baseline session lasting approximately 2.5 h, including separate consultations with a physician and a physiotherapist, and a 2-week follow-up with the physiotherapist for approximately 1 h. The BI applied in this study was based on a study by Molde Hagen. BI programmes have proven beneficial for low back pain, neck pain and fibromyalgia / widespread pain.
Participants (n)	n = 143
Drop-outs (n, %)	n = 15 (10.5 %)

Outcomes	RTW, partial and full [13] Register data was used to define the work/social insurance status per calendar month after inclusion in the trial. Absences ≤ 16 days are not registered. Out of work: > 50 % of working days in a calendar month were spent on full-time sick leave Partial RTW: > 50 % of working days in a calendar month were spent on part-time sick leave Full RTW: no benefits paid for > 50 % of working days in a calendar month
Statistical analysis /adjustments	Results presented as descriptive statistics (% RTW, graphical) and RR (MI/BI) calculated using multinomial logistic analysis with fully out of work as reference category.
Missing data	ITT, No loss to follow-up
Results	Full RTW: MI/BI N (%); RR (95 % CI) • 12-month: 63 (44.7) / 64 (44.8); 1.10 (0.67–1.81) • 24-month: 60 (42.6) / 52 (36.6); 1.25 (0.75–2.06) Partial RTW: RR (95 % CI) • 12-month: 1.60 (0.74–3.46) • 24-month: 0.85 (0.42–1.71) Out of work: MI/BI N (%); no statistical test presented • 12-month: 59 (41.8) / 65 (45.5) • 24-month: 63 (44.7) / 68 (47.6)
Outcomes	RTW and Predictors of RTW [14] Register data was used to define the work/social insurance status per calendar month after inclusion in the trial. Absences ≤ 16 days are not registered. Every month of the follow-up period, each participant was either out of work, partly working or fully working. Success month = a month with increased work participation compared with the baseline Non-success month = a month with unchanged or decreased work participation compared with baseline. RTW = the first of 3 consecutive success months.
Statistical analysis /adjustments	Odds of RTW calculated using binary multiple logistic regression models, including all the following a priori selected, independent variables: intervention (MI / BI); dichotomised values (> median / ≤ median) for Subjective health complaints (SHC total scale), Anxiety and depression (HADS), Neuroticism (EPQ-N), Acceptance of chronic pain (CPAQ), Muscular pain (SHC musculoskeletal subscale), Support at work, Burden of work (Karasek & Theorell); dichotomised values (yes / no) for physically demanding work, psychologically demanding work, belief that work was the cause of the pain; and duration of sick leave categorised as: 0–91; 92–153; 154–213; and 214–365 days. The models also included sex and age (20–29; 30–39; 40–49; 50–60 years). Each predictor variable was assessed for interaction with the intervention in the models according to hierarchical elimination. The models' goodness of fit was tested by the Hosmer-Lemeshow test. 8 patients (MI=2, BI=6) were no longer certified sick at baseline; they were included in the analyses as non-RTW.

Missing data	ITT, No loss to follow-up
Results	**RTW:** MI/BI N (%); OR (95 % CI) 12-month: 90 (63.8) / 84 (58.7), p=0.38; 1.13 (0.67–1.91). **Also reported:** RTW at 3-month, predictors at 3 and 12 months.
Risk of bias	RTW: Moderate
Comments	ClinicalTrials.gov Identifier: NCT01346423 Article [13] reports RTW. Subjective health outcomes are reported in [13], (not included). Article [14] is an analysis of predictors of effect based on results published in the articles mentioned above. Note: the authors argue that although there is little difference in the long term, the RTW occurs faster in MI group, which is not shown with the time points tabulated.

Brouwers et al. 2006 and Brouwers et al. 2007

Author	Brouwers et al.
Year	2006
Country	The Netherlands
Reference	[15]
Author	Brouwers et al.
Year	2007
Country	The Netherlands
Reference	[16], cost-effectiveness analysis based on trial data. Details reported in Table of included health economic studies.
Study design	RCT
Setting	Primary care. Intervention delivered by social workers. Usual care delivered by general practitioners.
Recruitment	Patients from 70 general practitioners. Recruitment time: August 2001 and July 2003.
Population	Patient with emotional distress or minor mental disorders (according to general practitioner and self-report). Age 18-60. For inclusion, the patients had to be on sick leave, or plan to be on sick leave directly after visit to the general practitioner. Mean age (SD): Intervention group=39.4 (9.1). Control group=40.1(9.3) Sex (% female): Intervention group=58.2. Control group=60.4.
Follow-up	Patients on sick leave at baseline (%): Intervention group: 91.8; Control group: 89.6. 3, 6 and 18 months.
Intervention	The intervention was given by social workers and aimed at activating and supporting the patient to restore coping and to adopt a problem-solving approach toward his/her problems. The intervention followed a three-step model (1. Acknowledge and accept problems, 2. Define problems an develop problem-solving strategies, 3. Implementation of strategies). Described in a treatment manual (five individual 50-min sessions over 10 weeks). Patients were encouraged to make daily activities and motivated to solve work-related problems actively, to get in contact with their occupational physician and discuss reintegration and to resume work as soon as possible.
Participants (n)	Intervention: n=98.
Drop-outs (n, %)	Drop-outs from intervention: 0 after 3 months, 6 (6 %) after 6 months, 12 (12 %) of 98 after 18 months.
Comparison	General practitioners' usual care, which comprised (any combination of) guidance and counselling by the GP, medication, and referral to mental health care.
Participants (n)	Control: n=96
Drop-outs (n, %)	Drop-outs from intervention: 6 (6 %) after 3 months, 9 (9 %) after 6 months, 19 (20 %) after 18 months.
Statistical analysis /adjustments	Intention-to-treat principle. Demographics were analysed by chi-square and t test. (No differences in baseline characteristics).

	Primary data (survival statistics of sick leave duration) was analysed with the KaplanMeier method and Cox regression analyses. Longitudinal data for secondary outcomes (e.g., SF-36) were analysed by means of three-level (general practitioners, subjects, and measurements) repeated-measures analyses. Covariates were controlled for age, education level, sex, and treatment preference (covariates did not significantly affect the analyses).
Outcomes	Primary: Sick leave duration (reported as hazard ratios and mean times for return to partial or full work). Secondary: Summary scales of the physical and mental components of SF-36, and measures of depression and anxiety with the HADS and 4DSQ scales. (In the trial functional status was defined as the measures of the SF-36 scales). Secondary outcomes reported after 3, 6 and 18 months.
Missing data	No significant difference in drop-out between groups. Censored cases include those who did not experience the event of work return before drop-out.
Results	Hazard ratio intervention: control for partial return to work: 1.09 (95 % CI=0.81 to 1.47) Hazard ratio intervention: control for full return to work: 1.04 (95 % CI =0.76 to 1.42) Mean number of days until full work resumption in intervention group (SD): 153 (122) Mean number of days until full work resumption in control group (SD): 157 (121) (Mean difference between groups was not significant) Patients on sick leave in control group at baseline and after 6 and 18 months: 89.6 %, 14.1 % and 14.5 %. Patients on sick leave in intervention group at baseline and after 6 and 18 months: 91.8 % 18.7 % and 9.2 %. Patients partially resuming work in control group after 6 and 18 months: 23.5 % and 7.9 % Patients partially resuming work in intervention group after 6 and 18 months: 23.1 % and 5.7 % Patients fully resuming work in control group after 6 and 18 months: 62.4 % and 77.6 %. Patients fully resuming work in intervention group after 6 and 18 months: 58.2 % and 85.1 % HADS total score (SD) after 6 and 18 months: No significant difference between groups 4DSQ summary score (SD) after 6 and 18 months: No significant difference between groups. SF-36 physical component (SD) after 6 and 18 months: No significant differences between groups.

	SF-36 mental component (SD)after 6 and 18 months: No significant difference between groups.
Risk of bias	Moderate for all outcomes. Since most domains have moderate risk of bias a high risk of bias overall was considered.
Comments	

Busch et al. 2011

Author	Busch et al.
Year	2011
Country	Sweden
Reference	[17]
Study design	RCT
Setting	Rehabilitation clinics
Recruitment	The subjects were recruited from the AFA health insurance register that covers about 3 000 000 employees.
Population	Persons, 18-60 years of age, on continuous sickness absence for 1 to 6 months due to nonspecific spinal pain Mean age in all groups between 43-44 years. Sex (% female) in all groups between 45 and 68 % Total sick leave the year before inclusion in all groups between 135 and 162 days.
Follow-up	10 years
Intervention	Behaviour-oriented physical therapy (PT). Participants was assigned to individually tailored training programs scheduled 20 hours per week. The programs included goal setting, gradually increased exercises, aerobic training, pool training, relaxation techniques, and body awareness therapy.
Participants (n)	54
Drop-outs (n)	6
Intervention	Cognitive behavioural therapy (CBT). Scheduled activities for approximately 13-14 hours per week. The activities included activity planning, goal setting, problem solving, applied relaxation, cognitive coping techniques, activity pacing, how to break vicious circles, assertion training, and the role of significant others.
Participants (n)	49
Drop-outs (n)	8
Intervention	Behavioural medicine rehabilitation (BM). A multidisciplinary program in which all parts of PT and CBT programs were included. 40 scheduled hours per week.
Participants (n)	63
Drop-outs (n)	14
Comparison	Treatment as usual
Participants (n)	48
Drop-outs (n)	0
Statistical analysis /adjustments	Nominal data were analysed using the X^2-test. Longitudinal data were analysed using a mixed model with 10 repeated measurements (one for each year) on each subject.
Outcomes	All-cause sick leave and disability pension 10 years after rehabilitation. Register data.
Missing data	0 %

Results	Primary (RTW) **Days on sickness absence due to sick leave** BM: -77 days (95 % -527 to 372, p=0.73) PT: -122 days (95 % -587 to 343, p=0.61) CBT: 40 days (95 % -430 to 510, p=0.87) CG: 0 days **Days on sickness absence due to disability pension** BM: -466 days (95 % -883 to -49, p=0.029) PT: 187 days (95 % -234 to 608, p=0.380) CBT: 76 days (95 % -370 to 522, p=0.735) CG: 0 days
Risk of bias	Days on sick leave: Moderate Days on disability pension: Moderate
Comments	The study also included an economic analysis which compared the cost of the interventions to the impact on indirect costs due to loss of production. This analysis was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Bültmann et al. 2009

Author	Bültmann et al.
Year	2009
Country	Denmark
Reference	[18]
Study design	RCT with economic evaluation.
Setting	Intervention delivered by an interdisciplinary team consisting of an occupational physician, an occupational physiotherapist, a chiropractor, a psychologist, and a social worker who has the role of case worker establishing and maintaining contact with the workplace and the municipal case manager.
Recruitment	Participants were recruited between April 2004 and April 2005. Workers on sick leave for at least 4 weeks were invited to an information meeting at one of the four participating municipalities. If an eligible worker wanted to participate, he/she was asked to complete an informed consent form and the baseline questionnaire.
Population	Workers on sick leave for 4-12 weeks due to musculoskeletal disorders (MSDs). Exclusion criteria: mental health disorders, alcohol or drug addiction, pregnancy, having quit job or being fired before randomisation. In the first 6 months, only workers with LBP were included. Later, workers with other MSDs were also included to obtain a sufficient number of study subjects. Age (mean, SD): CTWR = 44.2 (10.8) years; CCM = 42.9 (11.9) years Female (%): CTWR = 66 %; CCM = 83 %
Follow-up	3 and 12 months
Intervention	Coordinated and Tailored Work Rehabilitation (CTWR) delivered by an interdisciplinary team. CTWR consists of two main components: Systematic multidisciplinary work disability screening and identification of barriers for RTW- The participant consecutively sees the occupational physician (medical assessment), the chiropractor (biomechanical assessment), the occupational physiotherapist (work-related assessment), and the psychologist (psychological assessment). The individual screenings are followed by an interdisciplinary team conference with case worker participation. Collaborative development of a coordinated, tailored and action-oriented work rehabilitation plan.
Participants (n)	68
Drop-outs (n, %)	Drop-out after randomisation (n=2)
Comparison	Conventional case management (CCM) as provided by municipality. No further details on what CCM comprised.
Participants (n)	51
Drop-outs (n, %)	Drop-out after randomisation (n=4)

Statistical analysis /adjustments	Mann Whitney U tests were used to examine differences between the groups.
Outcomes	Primary outcome: cumulative sickness absence hours. Secondary outcomes: work status, pain intensity and functional disability. Additionally, a cost-benefit analysis was conducted from a societal perspective.
Missing data	No missing data for work-related outcomes as these were collected from administrative data. Missing data at 12 months for pain intensity and functional disability (collected through questionnaire): CTWR: (n=12, 18 %); CCM (n=21, 45 %).
Results	Cumulative sickness absence hours The number of sickness absence hours was significantly lower in the CTWR group as compared to the control group. Mean (SD) for CTWR at 12 months: 656.6 (565.2); Mean (SD) for CCM at 12 months: 997.3 (668.8). P for difference = 0.006 Work status Percentage having returned to work at 12 months: CTWR: 78 %; CCM: 62 %. P-value for difference not reported.
Health economic results	Cost-benefit analysis This analysis comprised direct intervention costs for CTWR, saved costs due to reduced production loss, and costs for primary and secondary health care treatment as well as prescribed medication. Incremental costs at 12 months follow-up: Incremental intervention cost: 12 000 DKK Average incremental costs of productivity loss: - 67 375 DKK (p=0.006) Average incremental outpatient treatment cost: -3 598 DKK (p=0.047) Net benefit of CTWR vs CCM: 58 973 per person. Cost-effectiveness analysis This analysis estimated the costs per averted absence day. Included costs were intervention costs and outpatient treatment costs. Incremental costs at 12 months follow-up: 8 402 DKK Incremental effect (averted absence days) of CTWR versus CCM at 12 months: 46 days Incremental cost-effectiveness ratio (ICER): 183 DKK per day All costs reported in 2006 DKK.
Risk of bias	Moderate for RTW-outcomes Secondary outcomes on pain intensity and functional disability not tabulated due to high risk of bias.

Comments	The methodological quality of the health economic analysis within this study was assessed as moderate/high and the transferability to the Swedish setting was assessed as moderate. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Carlsson et al. 2013

Author	Carlsson et al.
Year	2013
Country	Sweden
Reference	[19]
Study design	RCT
Setting	Council-operated primary health care centre in mid Sweden
Recruitment	Among all patients with psychiatric or musculoskeletal diseases in the region who were full- or part-time sick-listed. The current sick-leave period had to be a maximum of 28 days at randomisation. Recruitment took place from spring 2007 until winter 2008/2009.
Population	N=36 (I/C: 18/15) Conditions: Psychiatric (ICD-10: chapter V F00-F99): N = 6 (I/C: 3/3) Musculoskeletal diseases (ICD-10: chapter XIII M00-M99): N = 27 (I/C: 13/11) Both: N = 3 (I/C: 2/11) Age (mean): Total: 46 years (I/C: 48/44 years) Sex (% women): Total: 67 (I/C: 67/67) Full-time sick leave: N = 29 (I/C: 15/14) Unemployment: N = 3 (I/C: 2/1)
Follow-up	3-, 12-month
Intervention	Multidisciplinary assessment. One physiotherapist, one psychotherapist, and one occupational therapist made all assessments. The physiotherapist performed a clinical examination of the musculoskeletal system. The psychotherapist assessed the psychosocial situation at work and at home. The occupational therapist performed an assessment of the patient's general working capacity. All three therapists used the methods and tools they normally use in their clinical work (Appendix 1). For each patient, only methods judged relevant were used. The intervention did not include any treatment, but if a patient was judged to have potential to benefit from treatment, he or she was referred by the GP to standard healthcare resources.
Participants (n)	n = 20
Drop-outs (n, %)	n = 2 (10 %) (withdrew after randomisation and did not attend assessment).
Comparison	Treatment as usual Received “treatment as usual”, which did not include this kind of early assessment.
Participants (n)	n = 16
Drop-outs (n, %)	n = 1 (6 %) (withdrew after randomisation).
Outcomes	**Sick-leave** The data on duration and extent of the sick-listing periods in the study were taken from the electronic patient records and from the records of the Social Insurance Agency. Still on sick-leave = number still on sick-leave

	Gross sick-leave = number of days in the period Net sick-leave = number of days in the period multiplied by the percentage sick-leave
Statistical analysis /adjustments	No adjustments, descriptive statistics, non-parametric two-tailed tests for significance
Missing data	n = 3, not included in analysis
Results	**Still on sick-leave after 12 months:** I: 4/18 C: 1/15, p = 0.346 **Gross sick-leave (days):** mean (SD), p-value; Median (IQR, Range) 0 to 3 months I: 58 (32) C: 36 (33), p = 0.038; I: 65 (69, 81) C: 21 (51, 87), 3 to 12 months I: 91 (123); 58 (95), p = 0.727 **Net sick-leave (days):** mean (SD), p-value; Median (IQR, Range) 0 to 3 months I: 48 (32) C: 32 (29), p = 0.070; I: 42 (73, 84) C: 21 (39, 87) 3 to 12 months I: 77 (109) C: 37 (62), p = 0.580
Risk of bias	Still on sick-leave: Moderate Gross sick-leave: Moderate Net sick-leave: Moderate
Comments	

Cederberg et al. 2022

Author	Cederberg et al.
Year	2022
Country	Sweden
Reference	[20]
Study design	RCT
Setting	Nine primary health-care centers
Recruitment	Between February 2018 and June 2020, designated health care professionals consecutively screened medical records of 9 primary health care centers for eligible participants
Population	Patients on sick leave (maximum 30 days) due to CMD Age (mean, SD): 42.2 (11.5) years Female (%): 83.7 % Sick leave (100 %): I = 58.8 %, C = 71 % Sick leave (50 %): I = 29.4 %, C = 19.6 %
Follow-up	At 3 and 6 months
Intervention	Person-centered eHealth intervention plus usual care. In addition to UC (see below), an eHealth intervention built on person-centered care principles and consisting of telephone support and a web-based platform; conducted by professionals from different disciplines (nursing, physiotherapy, occupational therapy) who received a half-day training and education about CMD and an introduction to person-centered care plus a regular forum for discussion; individualised intervention in terms of content and structure
Participants (n)	107
Drop-outs (n, %)	5 (4.7 %)
Comparison	Usual care (UC) Typically, an appointment with a physician for follow-up on sick leave and treatment decisions, e.g., medication or psychological therapies such as CBT; may also include contact with a physiotherapist, rehabilitation coordinator or occupational therapist, as well as group sessions targeting specific symptoms och problems.
Participants (n)	108
Drop-outs (n, %)	1 (0.9 %)
Statistical analysis /adjustments	ITT-analysis using binary logistic regression analysis of data dichotomised as improved vs unchanged/deteriorated; imputation by last observation carried forward.
Outcomes	-Level of sick leave (self-reported) -Changes in general self-efficacy (composite score): General Self-Efficacy Scale (GSES); total score from 10 to 40 (higher = higher sense of self-efficacy).
Missing data	Was imputed

Results	RTW (at 6 months) Sick leave did not differ between group in ITT or PP analyses; 70 % in the control group and 70 % in the full intervention group reported 0 % sick leave at 6 months, p = 0.96. Secondary (at 6 months) No significant difference between the groups in percentage of patients improved on the composite score of self-efficacies (improved vs deteriorated or unchanged), OR (95 % CI) 1.47 (0.80 to 2.73).
Risk of bias	Moderate
Comments	

Dalgaard et al. 2017

Author	Dalgaard et al.
Year	2017
Country	Denmark
Reference	[21]
Study design	RCT
Setting	A department of occupational medicine at a regional hospital
Recruitment	Between June 2009 and February 2014, sick-listed patients (n=1182) at sickness benefit departments from three local municipalities were referred to the department of occupational medicine and screened for eligibility by use of a screening questionnaire. Two-step randomisation: Those randomised to clinical examination were in a second step randomised to either intervention or control group A. (Control group B (n=49), randomised to no clinical assessment, is not tabulated here due to potentially wrong population)
Population	Patients on part- or fulltime sick leave (maximum 4 months) with work-related stress complaints (adjustment disorders, mild depression) Age (mean, range): I = 45 (28-60) years; C = 44 (29-63) years Female (%): I = 74.1 %; C = 71.4 % Sick leave (full): I = 56.9 %; C = 62.5 % Sick leave (partial): I = 43.1 %; C = 37.5 %
Follow-up	At 16 and 44 weeks (4 and 10 months)
Intervention	Stress management intervention (SMI) Six one-hour sessions of individual work-focused cognitive behavioural therapy (CBT) conducted by a psychologist over a period of 16 weeks and covering: 1) identifying work-related stressors, 2) modifying cognitive and behavioural coping strategies, 3) providing psychoeducation about work-related stress, 4) assigning homework, 5) assistance in planning RTW; an optional workplace intervention was included (used by 6 participants)
Participants (n)	58
Drop-outs (n, %)	None reported
Comparison	Minimal CAU clinical assessment (control group A) Receiving clinical assessment but no treatment
Participants (n)	56
Drop-outs (n, %)	None reported
Statistical analysis /adjustments	ITT-analyses using survival analysis (Kaplan-Meier) and Cox proportional hazard regression (crude and adjusted for age, gender, occupation, sick leave during previous year, full or partial sick leave, and diagnosis).

Outcomes	Time until lasting RTW (register data): defined as four consecutive weeks with no registration of sick leave payments or equivalent in the DREAM database (covering reimbursements to employers from the Danish government, not differing between full- or part-time sick leave). Self-reported work status (questionnaires).
Missing data	RTW: None for register data
Results	Hazard ratio for RTW, Stress-management intervention (SMI) compared to Control A Crude HR: 1.33 (95 % CI 0.88 to 2.01), p = 0.17 Adjusted HR: 1.57 (95 % CI 1.01 to 2.44), p = 0.04 Time to lasting RTW, median (95 % CI) weeks Stress-management intervention (SMI): 15 (12 to 19) weeks. Minimal CAU clinical assessment (control group A): 19 (15 to 30) weeks. Fired at 10 months (number) Stress-management intervention (SMI): 11 Minimal CAU clinical assessment (control group A): 10
Risk of bias	RTW: Moderate
Comments	Control group B (receiving no clinical assessment) not tabulated, due to potentially non-relevant population

de Vente et al. 2008

Author	de Vente et al.
Year	2008
Country	The Netherlands
Reference	[22]
Study design	RCT
Setting	Not clearly stated (outpatients at secondary care); in the context of occupational health services
Recruitment	Through two occupational health services, general practitioners, and by self-referral in reaction to advertisements; individuals (n=136) screened for eligibility by telephone interview and semi structured diagnostic interview administered by a clinical psychologist; a total of 82 patients were randomised.
Population	Fatigued individuals on sick leave with work-related stress Age (mean, SD): I = 41.6 (9.4) years; C1 = 41.5 (10.3) years; C2 = 40.9 (9.6) years Female (%): I = 39 %; C1 = 43 %; C2 = 35 % Sickness absence at baseline, mean (SD) weeks: I = 9.6 (7.2); C1 = 8.6 (7.2); C2 = 8.7 (8.4).
Follow-up	At 4, 7 and 10 months
Intervention	Individual stress management training (Individual SMT). Twelve one-hour individual sessions based on CBT techniques, conducted by a psychologist; comprising five modules: a) psychoeducation, self-assessment of stressors and complaints, lifestyle, and relaxation techniques; b) cognitive restructuring; c) time management and goal setting; d) assertiveness skills; e) evaluation and relapse prevention.
Participants (n)	28
Drop-outs (n, %)	1 (3.7 %)
Comparison 1	Group stress management training (Group SMT). Same protocol as the individual intervention but given a two-hour session in groups of seven participants.
Participants (n)	28
Drop-outs (n, %)	5 (17.8 %)
Comparison 2	Care as usual (CAU) Regular visits to an occupational physician (OP), general practitioner (GP), and/or a maximum of five treatment sessions by a psychologist or social worker.
Participants (n)	26
Drop-outs (n, %)	8 (30.8 %)
Statistical analysis /adjustments	ITT-analyses using longitudinal autoregression analyses (adjusting for the measurement of the same variable one time-point earlier); Kaplan-Meier survival analyses.
Outcomes	Absenteeism (self-reported in diaries) operationalised as: 1) number of full-day equivalent working days absent.

Missing data Results	2) time until complete work resumption (from the start of the episode of absenteeism during which participants were included in the study). Data on absenteeism at 10 months based on n = 62, i.e., overall missing data from 21 %. **Number of days absent at 10 months (mean, SD)** Individual SMT: 21.73 (26.74) days Group SMT: 18.79 (22.72) days Care as usual (CAU): 14.89 (25.25) days (NS between-group differences in crude and adjusted analyses). **Weeks until complete work resumption, mean (median)** Individual SMT: 37 (40) weeks Group SMT: 32 (29) weeks Care as usual (CAU): 32 (29) weeks (Between-group differences of survival curves, p = 0.345).
Risk of bias	Self-reported RTW: Moderate Self-reported distress and burnout complaints: high risk of bias due to higher drop-out rate (thus not tabulated here)
Comments	

de Weerd et al. 2016

Author	de Weerd et al.
Year	2016
Country	The Netherlands
Reference	[23]
Study design	RCT
Setting	Seven departments within a Dutch multicentre institution specialised in the outpatient CBT for work-related psychological problems.
Recruitment	Between September 2011 and March 2013, employees on sick leave due to CMD who consented participation (n=190) were invited to the study by their therapist if their employers agreed to pay for and participate in CDM; the employers of 60 employees agreed, thus, 60 employees were randomised
Population	Employees partially sick-listed with common mental disorders and referred by their GPs for specialised mental healthcare; in both groups, the most common disorder (about 50 %) was undifferentiated somatoform disorder (proxy label for burnout). Age (mean, SD): I = 39.5 (9.7) years; C = 40.3 (8.9) years Female (%): I = 58.1 %; C = 34.5 % Sick leave, mean (SD) percentage work resumption at intake: I = 9.1 (20.8); C = 8.4 (18.7)
Follow-up	End of treatment (length of treatment not stated); 12 months.
Intervention	Work-focused cognitive behavioural therapy (CBT) plus convergence dialogue meeting (CDM) CBT performed according to protocols for Axis I disorders of the DSM-IV; therapists were encouraged to address RTW early in treatment; in addition, CDM, which is a meeting of approximately 90 mins between employee, supervisor, and therapist, initiating a dialogue to identify and solve obstacles for RTW.
Participants (n)	31
Drop-outs (n, %)	3 (9.7 %)
Comparison	Work-focused cognitive behavioural therapy without CDM. CBT performed according to protocols for Axis I disorders of the DSM-IV; therapists were encouraged to address RTW early in treatment.
Participants (n)	29
Drop-outs (n, %)	None reported
Statistical analysis /adjustments	PPT-analyses using linear regression, adjusted for the gender difference between groups.
Outcomes	Time to first RTW (self-reported): cumulated calendar days between intake and start/increase of work

	Time to full RTW (self-reported): cumulated calendar days between intake and RTW at equal earning as before reporting sick. Number of employees with full RTW at end of treatment (length of treatment not stated, data not reported here). Change in Symptom Checklist-90 (SCL-90) score at end of treatment (length of treatment not stated, data not reported here).
Missing data	Data from drop-outs (n=3, 9.7 % in the intervention group) not included in the analyses.
Results	RTW **Time to first RTW, mean (SD)** Work-focused CBT plus CDM: 80.4 (47.4) days Work-focused CBT without CDM: 82.5 (49.4) days P = 0.878 **Time to full RTW, mean (SD)** Work-focused CBT plus CDM (n=17): 217.7 (75.4) days Work-focused CBT without CDM (n=17): 168.8 (73.0) days P = 0.064
Risk of bias	RTW outcomes: Moderate risk (leaning towards high)
Comments	

Du Bois et al. 2012

Author	Du Bois et al.
Year	2012
Country	Belgium
Reference	[24]
Study design	RCT
Setting	Given by medical advisers working in the Belgian compulsory social security system
Recruitment	Between March and September 2008, employed sick listed persons with low back pain claiming sickness allowances from a local Christian Sickness Fund (n=524) were screened for eligibility and consecutively recruited
Population	Claimants with low back pain (n= 509) Age (mean, range): 41.5 (19-64) years Female (%): 43 % Sick leave (partial/full): proportions not reported (all were sick listed at baseline)
Follow-up	12 months
Intervention	Combined counselling and disability evaluation At 1st, 2nd och 3rd month of sick leave, a rehabilitation-oriented coaching intervention, combining proactive strategy of counselling to stay active and the brief disability evaluation
Participants (n)	252
Drop-outs (n, %)	3 (1.2 %)
Comparison	Disability evaluation (usual care) At 3 months of sick leave, received a passive strategy composed of a brief disability evaluation without medical advice
Participants (n)	257
Drop-outs (n, %)	None
Statistical analysis /adjustments	Per protocol survival analysis (Kaplan-Meier) and Cox proportional hazard regression, univariate logistic regression for categorical variables, and Kruskal-Wallis test for continuous data (not stated if analyses were crude or adjusted).
Outcomes	-RTW rate -Sick leave recurrence -Duration of sick leave
Missing data	Data from 3 drop-outs in the intervention group missing.
Results	**Hazard ratio for first RTW, usual care compared to combined counselling/disability evaluation** HR: 0.90 (95 % CI 0.75 to 1.08), p = 0.26 **Hazard ratio for recurrent sick leave due to LBP, usual care compared to combined counselling/disability evaluation**

	HR: 1.60 (95 % CI 1.07 to 2.41), p = 0.02 **Off work after 12 months, number (%)** Usual care: 21 (8.2 %) Combined counselling/disability evaluation: 9 (3.6 %) OR (95 % CI) 2.37 (1.07 to 5.29) **Duration of sick leave, mean (95 % CI)** Usual care: 75.9 (65.4 to 86.56) days Combined counselling/disability evaluation: 63.9 (54.8 to 73.0) days p = 0.16
Risk of bias	RTW: Moderate
Comments	

Elvsåshagen et al. 2009

Author	Elvsåshagen et al.
Year	2009
Country	Norway
Reference	[25]
Study design	RCT
Setting	Primary vs specialist care referral.
Recruitment	Between October 2002 and September 2006, 829 persons on sick leave were included at 14 NAV-units (national insurance offices).
Population	Persons aged 25-50 on sick leave for 8-12 weeks due to musculoskeletal disease. Age (mean, SD): Intervention program = 38.6 (6.6) years; CAU = 39.0 (6.5) years Female (%): Intervention program 52 %; CAU = 49 %
Follow-up	24 months
Intervention	Intervention group Persons allocated to intervention group were referred directly by the insurance office (NAV) to specialist care where they were assessed by physician specialist in rehabilitation medicine including follow-up treatment either at hospital or in primary care by general practitioner including possible cooperation's with physiotherapists and chiropractors.
Participants (n)	n = 409
Drop-outs (n, %)	Not reported
Comparison	Control group Persons allocated to control group received usual care in primary care setting, including possible cooperation's with general practitioner, physiotherapists, and chiropractors.
Participants (n)	n =420
Drop-outs (n, %)	Not reported
Statistical analysis /adjustment	ITT, complete analysis. Mann-Whitney U.
Outcomes	Sick leave days during follow-up, using register data.
Missing data	None
Results	Number of sick leave days after 2 years follow-up: Intervention group 138.3 (SD 86.2) Control group 147.3 (SD 88.0) P for comparison (0.16)
Risk of bias	RTW: Moderate

Comments	Article in Norwegian.

Finnes et al. 2019

Author	Finnes et al.
Year	2019
Country	Sweden
Reference	[26]
Study design	RCT
Setting	The interventions were delivered by therapists. Within the Workplace Dialogue Intervention (WDI) intervention, the two last meetings/steps normally took place at the workplace.
Recruitment	Two modes of recruitment were used: Letters with information about the study along with instruction for enrolment were sent to eligible insured persons residing in Stockholm County currently on sickness absence (SA) who were identified in the register at the Swedish Social Insurance Agency (SIA). Weekly advertisements were placed in the local (Stockholm County) press, referring to the study home page providing information about the study and the opportunity to enrol via a secure link. The inclusion process consisted of (a) a telephone-based interview for screening of age, employment rate, current SA, and SA diagnosis, followed by (b) face-to-face interviews with the Mini-International Neuropsychiatric Interview (M.I.N.I.; Swedish Version 6.0.0d) and diagnostic criteria for exhaustion disorder conducted by trained licensed psychologists/psychology students.
Population	Current employment status of at least 50 % (working at least 20 hr per week) and a current SA status between 25 % and 100 % for the past 1 to 12 months, and Diagnostic criteria of an anxiety disorder, depression, or stress-related ill-health as defined by the diagnostic criteria for exhaustion disorder Age (mean, SD): ACT = 46.0 (8.2) years; WDI = 44.9 (8.6) years; ACT + WDI = 47.2 (9.2) years; TAU = 46.9 (9.5) years Female (%): ACT = 81 %; WDI = 73 %; ACT + WDI = 78 %; TAU = 75 %
Follow-up	Post-treatment, 3 months post-treatment and 9 months post-treatment
Interventions	Acceptance and commitment therapy (ACT). Workplace Dialogue Intervention (WDI). The WDI aims at the facilitation of dialogue between the participant and the workplace through a series of steps involving the participant and the nearest supervisor. ACT + WDI.
Participants (n)	ACT: n = 89 WDI: n =87 ACT+WDI: n = 88
Drop-outs (n, %)	Drop-outs after randomisation: ACT: n = 6; WDI: n =8; ACT+WDI: n = 9
Comparison	Treatment as usual (TAU) Participants continued the normal course of treatment or rehabilitation in standard care facilities.
Participants (n)	n=88

Drop-outs (n, %)	Drop-outs after randomisation (n=0)
Statistical analysis /adjustments	Linear mixed-effects modeling (LMM) for repeated measures. Generalised linear mixed model (GLMM) for SA data. Interactions with group and time, and the triple interaction with group, time, and moderator, were included in the models.
Outcomes	Primary outcome: 1) sickness absence (SA) days; 2) work functioning, measured using the Work Ability Index (WAI). Secondary outcomes: 1) general functioning, measured using the Work and Social Adjustment Scale (WSAS); 2) satisfaction with life, measured using the Satisfaction with Life Scale (SWLS); 3) symptoms of exhaustion disorder, measured using the Karolinska Exhaustion Disorder Scale (KEDS); 4) depression, measured using the HADS Depression subscale; 5) anxiety, measured using the HADS anxiety subscale.
Missing data	No missing data for number of SA days. Missing data at 9 months follow-up for outcomes collected through questionnaires: ACT: n = 9 (10 %); WDI: n =21 (24 %); ACT+WDI: n = 10 (11 %).
Results	**Results from regression models:** For the **primary outcomes** net SA days and work ability, none of the three treatment options outperformed TAU. In fact, contrary to the study hypothesis, the ACT + WDI intervention increased SA compared with TAU For the **secondary outcomes** there were no differences in overall estimated average linear change between groups during the follow-up period for any of the secondary outcome measures. **Crude results:** **Number of SA days at 9 months follow-up, mean (SD)** ACT = 19.4 (27.7) WDI = 19.3 (28.5) ACT + WDI = 20.8 (28.5) Treatment as usual = 17.4 (27.7) **Work Ability (WAI), 9 months follow-up, mean (SD)** ACT = 34.1 (9.0) WDI = 31.7 (9.2) ACT + WDI = 32.4 (8.3) TAU = 32.4 (8.6) **HADS Depression, 9 months follow-up, mean (SD)** ACT = 6.3 (4.5) WDI = 6.4 (4.9) ACT + WDI = 6.0 (4.4) TAU = 6.6 (4.8)

	HADS Anxiety, 9 months follow-up, mean (SD) ACT = 7.6 (4.8) WDI = 7.6 (4.4) ACT + WDI = 7.1 (3.7) TAU = 6.9 (4.6) Depression, KEDS 9 months follow-up, mean (SD) ACT = 19.7 (9.7) WDI = 21.1 (9.9) ACT + WDI = 19.5 (9.0) TAU = 20.8 (9.4) Satisfaction with life, SWLS 9 months follow-up, mean (SD) ACT = 21.7 (7.9) WDI = 21.6 (7.2) ACT + WDI = 21.3 (6.6) TAU = 21.1 (7.7)
Risk of bias	Moderate
Comments	Estimates from the GLMM showed a tendency toward a significant difference between participants with exhaustion disorder in the WDI group compared with TAU (b = 2.852, 95 % CI (–.282, 5.985).

Fleten et al. 2006

Author	Fleten et al. 2006
Year	2006
Country	Norway
Reference	[27]
Study design	RCT
Setting	The Norwegian National Insurance Office
Recruitment	October – November 1997 and 2001 and March – April 1998.
Population	990 persons newly sick listed with musculoskeletal or mental disorder. Age (<41 years): Intervention program 49.7 % Age (<41 years): Control program 52.5 % Female (%): Intervention program 61 %; control = 60 %
Follow-up	12 months
Intervention	Intervention group: Minimal intervention posted 14 days after sick leave initiation. Letter contained brief information about 1) possibility to return to adjusted job on sickness benefit, 2) cooperation between employee, employer, and insurance office. Intervention group also received a questionnaire.
Participants (n)	n = 495
Drop-outs (n, %)	Not reported, respondents to questionnaire 32 %.
Comparison	Control group: Care as usual, no extra information.
Participants (n)	n = 495
Drop-outs (n, %)	Not reported
Statistical analysis /adjustment	ITT.Mann-Whitney U and Cox regression. Total and stratified analyses. Multiple regression adjusted for gender, age group, educational level, occupation, and current diagnostic group.
Outcomes	Difference in mean length sick leave days. Return to work (cox regression)
Missing data	None
Results	In the intention to treat analysis, length of sick leave was reduced by mean of 8.6 days (-5.6 to 22.8) Return to work for total group: HR 1.07 (0.93 to 1.23).
Risk of bias	RTW: Moderate
Comments	

Gismervik et al. 2020 and Aasdahl et al. 2021

Author	Gismervik et al.
Year	2020
Country	Norway
Reference	[3]
Author	Aasdahl et al.
Year	2021
Country	Norway
Reference	[28] (24-month follow-up)
Study design	RCT
Setting	Inpatient multimodal rehabilitation as compared to outpatient Acceptance and commitment therapy.
Recruitment	Individuals were identified and invited (n=3 808) by the Norwegian Labour and Welfare Service between October 2012 and November 2014. Eligible respondents (271) underwent a multidisciplinary outpatient assessment and were then randomised.
Population	166 persons between 18-60 years sick listed between 2-12 months due to musculoskeletal, phycological or general unspecified disorder (e.g., fatigue). Age, mean (SD): Intervention program (I-MORE) 46.3 (8.7) Age, mean (SD): Control program (O-ACT) 45.2 (10.4) Female (%): Intervention program 81 %; control = 76 %
Follow-up	12 and 24 months
Intervention	Intervention group – I MORE at inpatient rehabilitation center In patient care included: group discussions, psychoeducation, individual meetings with coordinator, individual meeting with physician, supervised physical exercise, outdoor activities, net-work day, mindfulness sessions, walking to work, creating return to work plan, home practice. Lasted 3.5 weeks and was more comprehensive than O-ACT.
Participants (n)	n = 86
Drop-outs (n, %)	Drop-outs (not completing program) 19.7 %.
Comparison	Control group – O-ACT at outpatient hospital clinic. Supervised ACT-sessions (2.5 hours/week) for 6-7 weeks, contact with physiotherapist, social worker, and more.
Participants (n)	n = 80
Drop-outs (n, %)	Drop-outs (not completing program) 23.8 %.
Statistical analysis /adjustments	ITT. Mann-Whitney U, log rank test and Cox regression. Multiple regression adjusted for gender, age, educational level, main diagnosis for sick leave and length of sick leave at inclusion.
Outcomes	Cumulative number of sickness absence days (whole workdays lost). Sustainable return to work (4 weeks without sickness absence).

Missing data	None
Results	12 months: Sick Absence Days, median (IQR) I-MORE group: 85 (IQR 33 to 149) days O-ACT group: 117 (IQR 59 to 189) days, test of significance: p=0.034. 12 months: Sustainable Return to Work I-MORE group: 50 (58 %) O-ACT group: 31 (39 %) Crude and adjusted HR for RTW: 1.9 (95 % CI 1.2 to 3.2). 24 months: Sick Absence Days (median, IQR) I-MORE group: 159 (59-342) days O-ACT group: 249 (103-379) days, test of significance: p=0.07. 24 months: Sustainable Return to Work I-MORE group: 65 % O-ACT group: 51 % Crude HR for RTW: 1.59 (95 % CI 1.04-2.42), adjusted HR 1.77 (95 % CI 1.14-2.75).
Risk of bias	RTW: Moderate Secondary outcomes (pain, anxiety, depression symptoms, QoL) not tabulated due to having high risk of bias.
Comments	Similar to the study by Aasdahl 2018, [1] but with longer intervention time.

Glasscock et al. 2018

Author	Glasscock et al.
Year	2018
Country	Denmark
Reference	[29]
Study design	RCT
Setting	A department of occupational medicine at a regional hospital
Recruitment	Between September 2008 and January 2011, sick-listed patients (n = 845) were referred from general practice to the department of occupational medicine and screened for eligibility on basis of referral info and a clinical interview
Population	Patients on part- or fulltime sick leave (maximum 4 months) with work-related stress complaints (adjustment disorders, reaction to stress or mild depression). Age (mean, range): I = 45 (20-62) years; C = 45 (21-59) years Female (%): I = 84.2 %; C = 83.8 % Sick leave (full): I = 71.9 %; C = 85 % Sick leave (partial): I = 26.3 %; C = 15 % Not on sick leave: I = 1.8 %; C = 0 %
Follow-up	At 16 and 44 weeks (=end of treatment and 6 months post intervention).
Intervention	Stress management intervention (SMI). Six one-hour sessions of individual work-focused cognitive behavioural therapy (CBT) conducted by a psychologist over a maximum period of 16 weeks and covering: 1) identifying work-related stressors, 2) modifying cognitive and behavioural coping strategies, 3) providing psychoeducation about work-related stress, 4) assigning homework, 5) assistance in planning RTW; an optional workplace intervention was included (used by 25 % of the participants).
Participants (n)	57
Drop-outs (n, %)	Not reported
Comparison	Control group with no treatment. After the clinical assessment, only followed via questionnaires.
Participants (n)	80
Drop-outs (n, %)	Not reported
Statistical analysis /adjustments	Per protocol-analyses using Cox proportional hazard regression (crude and adjusted for gender, age, full or partial sick leave, occupation, sick leave during previous year, and diagnosis) for RTW data; multivariate repeated measurement analysis using a mixed model and imputation of missing values for secondary outcomes (PSS and GHQ).
Outcomes	Lasting RTW (register data from DREAM): defined as full-time resumption of work (or equivalent) for 4 consecutive weeks. Stress level: Perceived Stress Scale (PSS-10); 0-40, higher = higher levels of perceived stress. General health: General Health Questionnaire (GHQ-30); 0-30, higher = poorer wellbeing.

Missing data	RTW: I = 2 (3.5 %); C = 1 (1.25 %) PSS: I = 7 (12.3 %); C = 18 (22.5 %) GHQ: I = 6 (10.5 %); C = 19 (23.8 %)
Results	Primary (RTW) **Hazard ratio for lasting RTW, Stress-management intervention (SMI) compared to control** Crude HR: 0.84 (95 % CI 0.56 to 1.24), p = 0.372 Adjusted HR: 0.81 (95 % CI 0.54 to 1.20), p = 0.285 Secondary **Stress level (PSS-10), mean (95 % CI) at 10 months** Intervention: 14.53 (12.86 to 16.19) Control: 14.26 (12.78 to 15.75) Intervention effect -1.27, p=0.305 **General health (GHQ-30), mean (95 % CI) at 10 months** Intervention: 6.26 (4.26 to 8.24) Control: 5.02 (3.21 to 6.83) Intervention effect -0.20, p=0.906 Change data 0 to 10 months also available (not tabulated here).
Risk of bias	RTW: Moderate Secondary (stress, general health): Moderate
Comments	

Gross et al. 2014

Author	Gross et al.
Year	2014
Country	Canada
Reference	[30]
Study design	Cluster RCT (analysis at level of claimant)
Setting	Rehabilitation facility
Recruitment	Among claimants within the Alberta Workers' Compensation Board system, undergoing RTW assessment at the facility for musculoskeletal conditions between November 2011 and June 2012; clinicians (=the clusters) at the facility were randomised to administer either an interview-based work assessment (n = 15) or the standard performance-based FCE (n = 15); claimants were not aware of the study.
Population	Injured workers with chronic musculoskeletal conditions, who have surpassed expected injury healing times and have not RTW Age (mean, SD), entire sample: 45.9 (11.7) years Female (%), entire sample: 27 % Sick leave (full/partial not stated): unclear – 59 % were employed at baseline; 45.3 % were currently working (which means that 54.7 % were not working, and unemployed).
Follow-up	At 30 days, at 90 days, at 180 days (1, 3 and 6 months)
Intervention	Interview-based work assessment (without standard functional capacity evaluation, FCE) Clinicians, experienced in performing FCEs, were trained to instead conduct a semi structured functional interview based on the WorkWell FCE, and assess functional ability on self-report only; typically, during a 1.5 to 3h session
Participants (n)	100
Drop-outs (n, %)	None for compensation outcomes (proxy outcome for RTW)
Comparison	Performance testing using functional capacity evaluation (FCE) Routine practice, which included assessment of functional ability following a comprehensive WorkWell protocol involving a series of performance tests, including manual handling, positional testing, mobility, and coordination tests; typically takes 4 to 8 hours over a 2-day period
Participants (n)	103
Drop-outs (n, %)	None for compensation outcomes (proxy outcome for RTW)
Statistical analysis /adjustments	Analysis at the individual level, after examining potential clustering effect on claimant characteristics, using chi-square tests.
Outcomes	Receiving rate-based benefits at 180 days post assessment (register data): Partial or total temporary benefit: received when off work for part or a complete day of work. Partial or total vocational benefit: received when undergoing supported job search or retraining.

Missing data	None (register data).
Results	Receiving rate-based disability benefits at 180 days post assessment **Total temporary, number (%)** Interview-based work assessment: 3 (3 %) Performance testing using functional capacity evaluation (FCE): 6 (5.8 %) P = 0.33 **Partial temporary, number (%)** Interview-based work assessment: 5 (5 %) Performance testing using functional capacity evaluation (FCE): 1 (1 %) P = 0.09 **Total vocational, number (%)** Interview-based work assessment: 0 (0 %) Performance testing using functional capacity evaluation (FCE): 1 (1 %) P = 0.32 **Partial vocational, number (%)** Interview-based work assessment: 4 (4 %) Performance testing using functional capacity evaluation (FCE): 2 (1.9 %) P = 0.39 **Any compensation benefits, number (%)** Interview-based work assessment: 12 (12 %) Performance testing using functional capacity evaluation (FCE): 10 (9.7 %) P = 0.60
Risk of bias	Proxy outcome for RTW: Moderate risk of bias Functional level: High risk of bias due to high drop-out rate (not tabulated here).
Comments	Only 59 % were employed at baseline.

Gross et al. 2014

Author	Gross et al.
Year	2014
Country	Canada
Reference	[31]
Study design	Cluster RCT (analysis at level of claimant)
Setting	Rehabilitation facility
Recruitment	Among claimants within the Alberta Workers' Compensation Board system, undergoing RTW assessment at the facility for musculoskeletal conditions between November 2011 and January 2012; clinicians (=the clusters) at the facility were randomised to administer either an interview-based work assessment (n = 15) or the standard performance-based FCE (n = 15); claimants were not aware of the study.
Population	Injured workers with sub-acute musculoskeletal conditions, for the majority (69.8 %) sprain/strain/non-specific. Age (mean, SD), entire sample: 43.2 (13.1) years Female (%), entire sample: 37 % Sick leave (full/partial not stated): unclear – 84 % were employed at baseline; 50.7 % were currently working (which means that 49.3 % were not working, some of which were unemployed).
Follow-up	At 1, 3 and 6 months
Intervention	Interview-based work assessment (without standard functional capacity evaluation, FCE) Clinicians, experienced in performing FCEs, were trained to instead conduct a semi structured functional interview based on items in the WorkWell FCE, and assess functional ability on self-report only.
Participants (n)	120
Drop-outs (n, %)	None for compensation outcomes (proxy outcome for RTW).
Comparison	Performance testing using functional capacity evaluation (FCE). Routine practice, which included assessment of functional ability following a basic WorkWell 1-day protocol used when claimant is considered as a candidate for rehabilitation; involves a series of performance tests, including manual handling, positional testing, mobility, and coordination tests; typically takes 2 to 4 hours.
Participants (n)	105
Drop-outs (n, %)	None for compensation outcomes (proxy outcome for RTW).
Statistical analysis /adjustments	Analysis at the individual level, after examining potential clustering effect on claimant characteristics, using chi-square tests, adjusted for a wide range of potentially confounding factors.
Outcomes	Receiving rate-based benefits at 180 days post assessment (register data): Partial or total temporary benefit: received when off work for part or a complete day of work.

	Partial or total vocational benefit: received when undergoing supported job search or retraining.
Missing data	None (register data)
Results	Receiving rate-based disability benefits at 180 days post assessment. **Total temporary, number (%)** Interview-based work assessment: 2 (1.7 %) Performance testing using functional capacity evaluation (FCE): 1 (1 %) P = 0.64 **Partial temporary, number (%)** Interview-based work assessment: 3 (2.5 %) Performance testing using functional capacity evaluation (FCE): 2 (1.9 %) P = 0.76 **Total vocational, number (%)** Interview-based work assessment: 0 (0 %) Performance testing using functional capacity evaluation (FCE): 1 (1 %) P = 0.28 **Partial vocational, number (%)** Interview-based work assessment: 3 (2.5 %) Performance testing using functional capacity evaluation (FCE): 1 (1 %) P = 0.38 **Any compensation benefits, number (%)** Interview-based work assessment: 8 (6.7 %) Performance testing using functional capacity evaluation (FCE): 5 (4.8 %) P = 0.54
Risk of bias	Proxy outcome for RTW: Moderate risk of bias Functional level: High risk of bias due to high drop-out rate (not tabulated here).
Comments	

Hagen et al. 2000, Molde Hagen et al. 2003, and Lie et al. 2008

Author	Hagen et al.
Year	2000
Country	Norway
Reference	[32]
Author	Molde Hagen et al.
Year	2003
Country	Norway
Reference	[33]
Author	Lie et al. (data not tabulated since same results are reported in previous publications).
Year	2008
Country	Norway
Reference	[34]
Study design	RCT
Setting	
Recruitment	510 persons aged 18 to 60 years sick leave (more than 8 weeks) due to low back pain (back pain, low back pain, leg and thigh pain, back pain with and without sciatica) were invited by the national insurance office and were randomised to intervention or control. After randomisation n=237 (93 %) agreed to participate in the intervention group and n=220 (86 %) in the control group.
Population	Persons with low back pain, n 457; 48 % women. Age (mean, SD): Intervention group (n=237) = 40.8 (10.1)) years; Control group (n=220) = 41.7 (9.8) years. Male (n, %): Intervention group = 123 (52 %); Control group = 115 (52 %)
Follow-up	12 months, 36 months (11 persons discontinued and 5 persons died before 36 months evaluations, groups not specified).
Intervention	The intervention was a modification of Indahl's light mobilisation program, including questionnaires, examination, information about "good" prognosis, advice of activities and walks by physician and physiotherapist at a spice center.
Participants (n)	237
Drop-outs (n)	Pre study drop-outs after randomisation: n=17 (7 %)
Comparison	Patents in the control group were treated at primary care center and received care as usual.
Participants (n)	220
Drop-outs (n)	Pre study drop-outs after randomisation, n = 36 (16 %)
Statistical analysis /adjustments	ITT. Calculation of relative risk for main outcome. ANOVA for comparison of differences in mean sickness days. For 36 outcomes calculated odds ratios adjusting for gender, age, education, and marital status.
Outcomes	The main outcome was 100 % recovery (full duty work), mean sickness days.

Missing data	None for analysed at 12 months. (11 + 5 missing for 36 months follow-up.
Results	Results at 12 months: Returning to work: 68.4 % in intervention group compared to 56.4 % in control group: RR 1.21 (95 % CI 1.05 to 1.40). Mean sick leave days intervention group: 95.5 (82.2 to 108.8) vs control group: 133.7 (118.9 to 148.5), p 0.0002 Results for women: Women returning to work: 66.6 % in intervention group compared to 50.4 % in control group: RR 1.32 (95 % CI 1.05 to 1.66). Mean sick leave days for women in intervention group: 100.3 (80.2 to 120.4) vs control group: 128.9 (107.4 to 150.5), p 0.055 Results for men: Men returning to work: 69.9 % in intervention group compared to 61.7 % in control group: RR 1.13 (95 % CI 0.94 to 1.36). Mean sick leave days for men in intervention group: 91.1 (73.1 to 109.0) vs control group: 138.0 (117.3 to 158.7), p 0.001 Results at 36 months: Returning to work: 63.8 % in intervention group compared to 61.8 % in control group: RR 1.03 (95 % CI 0.90 to 1.19), adjusted OR 1.09 (0.75 to 1.62) There were no significant differences between the intervention and the control groups regarding total number of sickness days. Results for women: Women returning to work: 62.5 % in intervention group compared to 52.4 % in control group: RR 1.17 (95 % CI 0.93 to 1.47, adjusted OR 1.48 (0.85 to 2.58)). Results for men: Men returning to work: 65.0 % in intervention group compared to 69.3 % in control group: RR 0.96 (95 % CI 0.80 to 1.15), adjusted OR 0.82 (0.46 to 1.45).
Health economic results	Cost-benefit analysis: This analysis estimated the net present value of production for the society because of the reduction in number of days on sick leave, minus the cost of the intervention. Net benefit over 3 years of early intervention at spine clinic vs treatment according to standard practice in the primary health care sector: USD 2 822 per person. All costs reported in 1 995 NOK and presented as USD at the exchange rate NOK 7.3 per 1 USD.

Risk of bias	RTW: Moderate
Comments	Multi state model analysis used on same data in another study (Lie et al. 2008 [34], not tabulated). The methodological quality of the health economic analysis within this study was assessed as moderate/high and the transferability to the Swedish setting was assessed as moderate/high. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Hagen et al. 2010

Author	Hagen et al.
Year	2010
Country	Norway
Reference	[35]
Study design	RCT
Setting	Physical exercise program at spine clinic.
Recruitment	Written information about the study and invitation to participate was posted in five neighbour communities of the spine clinic in Ottestad. Recruitment period: April 2000 to February 2004.
Population	Sick-listed (for 8-12 weeks) patients with low back pain, aged 18-60. Mean age (SD): 39.6 (10) Female: 51 %
Follow-up	12 and 24 months after initial sick leave. (In the study, outcomes were also reported 6 months after the first visit to the spine clinic).
Intervention	Physical exercise program. Standardised physical exercise program at the spine clinic for 1 hour, three times per week, for 8 weeks. Aimed to re-educate the trunk muscle to its normal stabilising role and to improve balance, muscle co-ordination, and proprioception. (All patients included in the project received a brief intervention program before randomisation).
Participants (n)	n = 124. 50 % women. Mean age 41.6±11 years.
Drop-outs (n, %)	5 patients were lost within three months after inclusion. Range of attendances in the physical exercise program was 0–24 occasions, with a median of 15 occasions, and a mean of 13.8±7.2 occasions. (The total response rates on the questionnaires were 100 % at baseline (n=246), 88 % (n = 217) at 6-month follow-up, 76 % (n = 188) at 1-year follow-up, and 75 % (n=185) at 2-year follow-up).
Comparison	Control group Patients did not receive any treatment at the spine clinic in addition. (All patients included in the project received a brief intervention program before randomisation).
Participants (n)	n = 122. 52 % women. Mean age 40.7±10.5 years.
Drop-outs (n, %)	3 patients were lost within three months after inclusion. (The total response rates on the questionnaires were 100 % at baseline (n=246), 88 % (n = 217) at 6-month follow-up, 76 % (n = 188) at 1-year follow-up, and 75 % (n=185) at 2-year follow-up).
Statistical analysis /adjustment	Intention-to-treat principle. The groups were similar on baseline characteristics. Analysis of categorical variables: Standard chi-square tests for 2 x 2 cross-tabulations. Analysis of continuous data: two-group t-tests. Test for overall effects of dependent variables over time and for test of interactions with time: Linear mixed models with control for repeated measures.

Outcomes	<u>Data on sick leave (Total length and frequency):</u> Physical function (examined by a physiotherapist using six different tests) Sock test Pick-up test Loaded reach test Fifteen-meter walk Fingertip-to-floor test Static balance test <u>Self-reported Questionnaires:</u> Pain location Pain intensity on VAS Use of analgesics Psychological distress (Hopkin's Symptom Check list, HSCL-25) Disability (Roland Morris Questionnaire) Subjective Health Complaint Inventory Fear-avoidance beliefs Questionnaire (FABQ) Reported walking distance Physical activity
Missing data	No further information on the handling of missing data.
Results	**Return-to-work:** There were no statistically significant effects on return to work at any of the follow-up times. (No overall statistically significant gender effect on return to work, OR=1.06, p=0.91). **Pain, self-reported Questionnaires:** No significant group differences **Physical function (examined by a physiotherapist using six different tests):** No significant group differences. **Sock test:** Significantly improved for the intervention group: mean difference -0.34 (95 % CI -0.66 to -0.01), P=0.041. **Pick-up test:** No significant group differences **Loaded reach test:** No significant group differences **Fifteen-meter walk:** No significant group differences **Fingertip-to-floor test:** No significant group differences **Static balance test:** No significant group differences. (Both groups improved during the follow-up with reduced fear of pain for physical activity, better function, and increased return to work. This improvement may reflect the natural history of LBP).
Risk of bias	Moderate for all outcomes
Comments	

Haldorsen et al. 2002

Author	Haldorsen et al.
Year	2002
Country	Norway
Reference	[36]
Study design	RCT
Recruitment	All persons living in the municipality of Bergen or one of the surrounding municipalities who met the inclusion criteria according to municipal sickness insurance records during the enrolment period from January 1996 to March 1997 received an invitation by letter from the local National Health Insurance to participate in the trial.
Population	Patients with musculoskeletal pain on sick leave more than 50 % for at least 8 weeks, or not currently on sick leave but sick-listed for at least 2 months per year for the last two years. Before randomisation, patients were categorised into three groups differing in a prognosis score (good, medium, poor) for return to work, based on a brief, standardised screening of psychological and physiotherapy findings. Age (mean, SD): Light multidisciplinary treatment program = 43 (10.3) years; Extensive multidisciplinary program = 43 (10.5) years; TAU = 44 (10.9) years Female (%): Light multidisciplinary treatment program = 67 %; Extensive multidisciplinary program = 69 %; TAU = 63 %
Follow-up	14 months after screening
Intervention	Light multidisciplinary treatment program involving team of a neurologist, a general practitioner, a psychologist, two nurses, and four physiotherapists. Extensive multidisciplinary program, involving same team as above. The program lasted for 4 weeks, with 6-hour sessions 5 days per week and included cognitive behavioural modification in group sessions, education, exercises, and occasional workplace interventions.
Participants (n)	N randomised: Light multidisciplinary treatment program: n = 222; Extensive multidisciplinary program: n= 169.
Drop-outs (n, %)	Ten patients assigned to receive one of the two clinical treatments withdrew from the study before treatment was completed.
Comparison	Treatment as usual (TAU) by general practitioner
Participants (n)	263
Drop-outs (n, %)	No information
Statistical analysis /adjustments	(ANOVA) with Bonferroni correction for overall error rate, and with Chi-square tests. Calculation of differences in the monthly fractions of patients returned to work between the three treatment groups.
Outcomes	Primary outcome: Full return to work, calculated in percentage every month. Additionally, cost-benefit was calculated for the treatment programs.
Missing data	

Results	RTW records were not available for government-employed workers, which led to missing data as follows: Light multidisciplinary treatment program: n = 8; Extensive multidisciplinary program: n = 4; TAU: n = 15. All patients: Both light multidisciplinary and extensive multidisciplinary treatment increased the possibility of returning to work, compared to TAU. The difference is about 10 % after 14 months, in favour of those receiving either light multidisciplinary treatment (Chi2 = 3.6, df = 1, P= 0.05) or extensive multidisciplinary treatment (Chi2 = 4.6, df = 1, P < 0.04). Patients with good prognosis: No significant difference in RTW between groups. Authors did not report numerical results. Patients with medium prognosis: Differences in RTW rate were statistically significant both between light multidisciplinary treatment and TAU (63 % (n = 71) for light multidisciplinary group; 48 % (n= 54) for TAU; Chi2 = 5.5, df = 1, P < 0.02) as well as between extensive multidisciplinary treatment and TAU (62 % (n=55) for extensive treatment; 48 % (n=54) for TAU; Chi2 =3.9, df = 1, P < 0.05). Patients with poor prognosis: TAU and light multidisciplinary groups both had poor results on RTW (no numerical results reported). The difference between extensive multidisciplinary treatment and TAU was statistically significant (55 %, n = 28 for extensive treatment; 37 %, n = 26 for TAU; Chi2 = 3.7, df = 1, P < 0.05).
Risk of bias	Moderate
Comments	The study also included a health economic analysis of cost-benefit. This was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Hara et al. 2018

Author	Hara et al.
Year	2018
Country	Norway
Reference	[37]
Study design	RCT
Setting	Primary care in collaboration with community stakeholders.
Recruitment	Participants completing an ACT-based 3½ week occupational rehabilitation program were invited to participate in the study from January 2012 to June 2013.
Population	Persons with musculoskeletal or other chronic pain disorders, chronic fatigue, or a common mental disorder. Age (mean, SD): Intervention group = 42.9 (0.9) years; Control group = 41.7 (0.9) years Male (n, %): Intervention group = 23 (22 %); Control group = 20 (18 %) All participants were in temporary medical benefits: 44 % received sickness benefits and 56 % work assessment allowance.
Follow-up	56 weeks
Intervention	Boosted return to work follow-up in combination with standard community-based return to work follow-up. The boosted follow-up was delivered over 6 months by the on-site RTW coordinator. The sessions were primarily by telephone on monthly basis, if necessary, more frequent.
Participants (n)	104
Drop-outs (n)	0
Comparison	Standard community-based return to work follow-up only. Consisted of individualised follow-up delivered by different community stakeholders with predefined roles and obligations according to Norwegian legislation.
Participants (n)	109
Drop-outs (n)	1
Statistical analysis /adjustments	Generalised estimated equations (GEE) regression analysis was used to analyse dichotomous outcome variables. Principles of intention-to-treat analysis were adhered. Subgroup analysis was performed for defined RTW predictors and factors of specific societal interest.
Outcomes	Employment state and working hours were retrieved from register data. Secondary outcomes were self-reported.
Missing data	2.7 % of single long measurements of primary outcomes were missing.
Results	Primary (RTW) **Participation in competitive work ≥1 day per week:** Intervention group had 87 % increased odds (OR 1.87, 95 % CI 1.06-3.31, p=0.031) of re-entry to competitive work ≥1 day per week compared with the control. RTW after 1 year (minimum 1 d/week):

Health economic results	Intervention group 54.4 %, control group 44.8 %, NNT 10. Secondary **Days of Paid Work during the first year**: Intervention group=71 days; Control group=68 days **Receiving medical or non-medical benefits after 1 year**: Intervention group=26 %; Control group=19 % **Cost calculation:** The study included a calculation of the added cost of boosted RTW follow-up, applying an occupational rehabilitation institution perspective. The calculation comprised costs for number of individual and collaborative contacts, and type of contact that the participants had in addition to costs for the standard RTW follow-up program. The mean (SD) incremental cost per participant for boosted RTW follow-up versus standard RTW program at 6 months: 390.5 EUR (192.0). All costs reported in 2 014 EUR.
Risk of bias	RTW: Moderate Days of Paid Work: Moderate Medical Benefits: Moderate
Comments	The methodological quality of the cost calculation within this study was assessed as moderate and the transferability to the Swedish setting was assessed as moderate. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Harris et al. 2017

Author	Harris et al.
Year	2017
Country	Norway
Reference	[38]
Study design	RCT: CINS trial (multi-armed, multicentre, double-blind, placebo-controlled)
Setting	1 outpatient clinic
Recruitment	Recruitment through NAV February 2008 to June 2010
Population	N = 214 Condition: LBP, chronic ICPC diagnoses: L02 (back symptom/complaint), L03 (low back symptom/complaint), L84 (back syndrome without radiating pain), or L86 (back syndrome with radiating pain). Age (years): 44.8 (SD 9.8) Women: 50.5 % Symptom duration: average 10 years Sick leave: minimum 50 % sick-leave for 2-10 month
Follow-up	1 to 12-month, reported monthly
Interventions **Participants (n)** **Drop-outs (n, %)**	**BI alone:** 2-session brief cognitive clinical examination program delivered over 5 days. It is based on a noninjury model addressing pain and fear avoidance, where return to normal activity and work is the main goal. BI also includes a follow-up session with a physiotherapist, involving an educational and a behavioural part. Patients were additionally offered two short booster sessions. Total treatment time = 2 to 4 hours. Note that this group is also reported in [39] n = 100 allocated, 99 received allocated intervention **BI + gCBT:** BI + 7 90-minute manual-based treatment sessions, delivered in a group over 3 months. The treatment focused on living with back-pain and included exposure to pain-provoking physical activity. Total treatment time = 10.5 hours. sufficient adherence = attending at least 4 of 7 sessions, or completion due to full RTW n = 55 allocated, 52 received allocated intervention **BI + gPE:** BI + manual based Physical Education program which consisted of strength and endurance training, and relaxation, delivered to groups of 10 patients 3x 90 minutes per week. Goals were set for each individual which aimed at achieving functional improvement, especially focusing on work and activities of daily life. Patients were deliberately exposed to exercises they believed could exacerbate their LBP. Total treatment time = 54 hours. Extra treatments from a physiotherapist, psychologist, or MD were offered when needed. n = 60 allocated, 52 received allocated intervention

Outcomes	**Work participation (primary):** Data taken from the national social insurance registry (NAV) Increased work participation = Change from full-time sick-leave to part- or full RTW. Change from part-time sick-leave to a lower gradient of sick-leave or full RTW.
Statistical analysis /adjustments	ITT, unadjusted descriptive statistics, differences between groups were measured with chi-square tests for each of the 12 months.
Missing data	No loss to follow-up.
Results	**Increased RTW: n (%)** **0 to 12-month:** BI: 60 (60) BI + gCBT: 30 (54.6) BI + gPE: 31 (51.7) $Chi^2 = 1.15$ df = 2 p = 0.56. **Also reported:** Increased RTW from 0 to 11 months post intervention, differences significant for first 4 months.
Outcomes	**Health related outcomes (secondary)** The secondary outcomes were self-reported using validated scales: psychological distress and symptoms of anxiety and depression (HADS) pain related function (ODI) subjective health complaints (SHC) cooping (UCL, IMOC) and fear avoidance (FABQ).
Statistical analysis /adjustments	ITT & per protocol Mixed between–within subject analyses of variance with one between-group factor (BI, BI + gCBT, Bi + group PE) and with one within subjects/repeated measures factor (baseline and 12 months follow-up). The effect of time and the interaction effect are reported, and when significant, the interaction effects indicate different time courses for the three interventions. For group comparison, effect sizes are reported with partial eta squared. For post hoc analyses effect sizes are reported with Cohens d.
Missing data	12-month follow-up: n (%) BI: 39 (39.0) BI + gCBT: 14 (25.5) BI + gPE: 15 (25.0)
Results	Health-related outcomes per group Timepoint: Mean (SD) BI / BI + gCBT / BI + gPE **ODI** Baseline: 28.07 (12.60) / 28.74 (12.70) / 29.58 (13.29)

	12-month:	21.83 (13.80)	22.83 (15.38)	17.45 (13.60)
	Musculoskeletal (SHC)			
	Baseline:	8.37 (4.32)	8.59 (4.29)	8.45 (4.16)
	12-month:	6.31 (3.81)	6.94 (4.44)	6.27 (4.53)
	Pseudoneurological (SHC)			
	Baseline:	4.46 (3.45)	5.12 (4.01)	5.23 (3.38)
	12-month:	3.53 (3.03)	3.63 (3.44)	3.32 (2.87)
	Gastrointestinal (SHC)			
	Baseline:	2.29 (2.68)	2.25 (2.33)	2.56 (2.32)
	12-month:	2.33 (2.74)	2.02 (1.99)	1.89 (2.12)
	Allergy (SHC)			
	Baseline:	1.09 (1.48)	0.65 (1.11)	1.14 (1.72)
	12-month:	0.74 (1.39)	0.78 (1.23)	1.14 (1.76)
	Flu (SHC)			
	Baseline:	0.96 (1.20)	0.84 (1.22)	1.26 (1.58)
	12-month:	0.72 (1.31)	1.10 (1.74)	0.80 (1.19)
	Total (SHC)			
	Baseline:	17.12 (9.57)	17.33 (9.75)	18.58 (8.65)
	12-month:	13.60 (9.62)	14.40 (9.94)	13.38 (8.86)
	Anxiety (HADS)			
	Baseline:	4.85 (3.70)	5.93 (4.50)	5.43 (3.71)
	12-month:	4.24 (4.01)	3.93 (4.05)	3.78 (3.74)
	Depression (HADS)			
	Baseline:	3.92 (3.6)	4.71 (3.37)	4.20 (3.32)
	12-month:	3.11 (3.77)	3.42 (3.27)	2.87 (3.16)
	Coping			
	Baseline:	3.02 (0.20)	3.06 (0.31)	3.01 (0.30)
	12-month:	3.06 (0.31)	3.10 (0.30)	3.12 (0.30)
	FABQ-PA			
	Baseline:	11.82 (5.89)	12.80 (5.31)	12.42 (5.46)
	12-month:	8.41 (5.86)	8.58 (5.92)	7.31 (5.90)
	FABQ-W			
	Baseline:	22.38 (10.07)	24.48 (8.83)	26.03 (9.07)
	12-month:	17.6 (12.92)	19.31 (11.76)	18.84 (11.59)
	No significant differences were found on secondary outcomes, when tested in post hoc analyses.			
Risk of bias	RTW: Moderate Health related outcomes: Moderate			
Comments				

	Risk of bias for secondary outcomes: Moderate This article reports on 2 arms added to the main 4-arm, multicentre, randomised, double-blind, placebo-controlled CINS trial (reported in [39]). “The participating centres (clinics) were given the opportunity to add one or two additional treatment arms to the study. Consequently, for the clinic where the data for this study was drawn, patients were randomised to six treatments, the 4 in CINS + 2 unique for this study (BI + group CBT; and BI + group PE).”

Hees et al. 2013

Author	Hees et al.
Year	2013
Country	The Netherlands
Reference	[40]
Study design	RCT
Setting	Outpatient university clinic
Recruitment	Between December 2007 and October 2009, depressed patients were referred by OPs from several health services in the Amsterdam area.
Population	Employees sick-listed (for at least 25 %) due to major depression Age (mean, SD): I = 43.8 (9.0) years; C = 41.5 (9.6) years Female (%): I = 47 %; C = 59 % Sick leave, mean (SD) number of hours: I = 27.6 (10.0); C = 27.1 (8.8).
Follow-up	At 6, 12 and 18 months
Intervention	Adjuvant occupational therapy, OT (TAU + OT). TAU according to a protocol consistent with the APA guidelines, including psychoeducation, supportive therapy, and cognitive behavioural therapy interventions; if needed, pharmacotherapy according to protocolised algorithm; in addition, OT (18 group/individual sessions including one employer meeting) focused on a fast RTW and improving work-related coping och self-efficacy; employees were required to work at least 2 hrs weekly to be able to directly practice e.g. new coping strategies learned.
Participants (n)	78
Drop-outs (n, %)	10 (13 %)
Comparison	TAU Treatment according to a protocol consistent with the APA guidelines, including psychoeducation, supportive therapy, and cognitive behavioural therapy interventions; if needed, pharmacotherapy according to protocolised algorithm.
Participants (n)	39
Drop-outs (n, %)	6 (15 %)
Statistical analysis /adjustments	ITT-analyses using multiple imputation for missing data, and adjusting for baseline differences between groups, Cox proportional hazard model and Kaplan-Meier curves for HR for and duration until partial/full RTW; random coefficient regression analysis for reduction in hours of absenteeism and secondary outcomes; logistic regression for dichotomous outcomes (% remission, % RTW in good health).
Outcomes	Primary:

	Work participation (average hours of absenteeism over each 6-month period + duration in calendar days from start of treatment until partial/full RTW) – self-reported in weekly diaries. Secondary: **Depression** – Hamilton Rating Scale for Depression, HRSD: remission defined as score ≤7; Inventory of Depressive Symptoms-Self-report, IDS-SR: score of ≤13 defined as normal. **At-work functioning** – weekly self-reports of work efficiency: scale 1 (not productive at all) to 10 (very productive); three subscales (Output, Time, Mental-Interpersonal) from Work Limitations Questionnaire, WLQ: scale 0 to 100, reflecting percentage of time of experienced work limitation. **Health-related functioning** – three subscales (Mental Health, Role limitations, Role emotional) from Medical Outcomes Study-Short Form, MOS-SF 36, scale 0 to 100, higher score reflecting higher level of functioning. Additional analysis: **RTW in good health (RTW-GH) –** having achieved a full RTW while being remitted (HRSD≤7)
Missing data	13 % and 15 % in the two groups, multiple imputation was used in the analyses.
Results	RTW **Work participation – hours of absenteeism, mean (SD)** Adjusted effect OT at 12 months: -12.9 (95 % CI -32.3 to +6.6) Adjusted effect OT at 18 months: -1.9 (95 % CI -19.9 to +16.2) **Work participation – time until partial RTW** HR 0.72, 95 % CI 0.44 to 1.11, p = 0.14 **Work participation – time until full RTW** HR 0.93, 95 % CI 0.57 to 1.53, p = 0.79 Secondary **Depression – HRSD** Adjusted effect OT at 12 months: +1.4 (95 % CI -1.9 to +3.7) Adjusted effect OT at 18 months: -2.8 (95 % CI -5.5 to -0.2) **Depression – HRSD remission (≤7)** Adjusted effect OT at 12 months: +2 % (95 % CI -11 % to +15 %) Adjusted effect OT at 18 months: +18 % (95 % CI +7 % to +30 %) **Depression – IDS-SR** Adjusted effect OT at 12 months: -0.1 (95 % CI -4.3 to +4.0) Adjusted effect OT at 18 months: -1.8 (95 % CI -6.6 to +3.1)

	Depression – IDS-SR remission (≤15) Adjusted effect OT at 12 months: -9 % (95 % CI -20 % to +3 %) Adjusted effect OT at 18 months: -1 % (95 % CI -13 % to +11 %) **Health-related functioning – MOS-SF 36 (Mental Health, Role Emotional, Role Physical)** Adjusted effect OT at 12 months: NS effects for the three subscales Adjusted effect OT at 18 months: NS effects for the three subscales **At-work functioning – Efficiency** Adjusted effect OT at 12 months: -0.3 (95 % CI -0.9 to +0.2) Adjusted effect OT at 18 months: -0.4 (95 % CI –1.1 to +0.3) **At-work functioning – WLQ (Output, Time Management, Mental/Interpersonal)** Adjusted effect OT at 12 months: NS effects for the three subscales Adjusted effect OT at 18 months: NS effects for the three subscales **RTW in good health** Adjusted effect OT at 12 months: +8 % (95 % CI -3 % to +20 %) Adjusted effect OT at 18 months: +24 % (95 % CI +12 % to +36 %) Over time, the probability of RTW in good health increased more for TAU+OT compared to TAU: OR 1.9, 95 %CI 1.1 to 3.2, p=0.02
Risk of bias	RTW outcomes: Moderate Secondary outcomes: Moderate
Comments	

Heymans et al. 2006

Author	Heymans et al.
Year	2006
Country	The Netherlands
Reference	[41]
Study design	RCT
Setting	Occupational physician (OP) health service
Recruitment	At the OP visit (at one of the eight clinics) between October 2000 until November 2002
Population	Patients on sick leave for 3-6 weeks due to back pain Age (mean, SD): I1 (Low intensity) = 40.6 (10.2) years; I2 (High intensity) = 39.5 (9.5) years: C = 40.7 (9.6) years Female (%): I1 = 22.4 %; I2 = 23.5 %; C = 17.5 % Complete or partially on sick leave
Follow-up	6 months
Intervention	Low-intensity back school or high-intensity back school Low-intensity back school: Four group sessions once a week for 4 consecutive weeks lead by a physiotherapist. Each session was divided into an educational (30 min) and a practical part (90 min) and guided by written information and a standardised exercise program. High-intensity back school: Sixteen sessions twice a week for 8 weeks. The sessions were supervised by a physiotherapist and lasted for one hour. Principles of cognitive-behavioural therapy were applied throughout the program.
Participants (n)	98 low-intensity group, 98 high intensity group
Drop-outs (n, %)	n= 59, 30 %
Comparison	Usual care Usual care provided by the OP. After 12 weeks of sick-leave, the OP was advised to refer the worker to a back-school or a multidisciplinary rehabilitation program.
Participants (n)	103
Drop-outs (n, %)	n = 32, 30 %
Statistical analysis /adjustments	ITT-analyses. The Cox Proportional hazard model was used to analyse differences in RTW. The Kruskall-Wallis and x2 tests were used to assess group differences with regards to the total number of sick leave days and recurrent episodes of low back pain related work absence.
Outcomes	Primary: RTW: defined as the duration of work absenteeism in calendar days. Secondary: Pain intensity (VAS-scale), functional status (6-point Likert scale), kinesiophobia (Tampa Scale of kinesiophobia).

Missing data	ITT. 44 withdrew, 23 lost of interest and time, 5 questionnaires lost in email, 11 unknown, 6 recovered, 1 dissatisfied with treatment, 1 late compensation of travel expenses and 1 private problems.
Results	Primary (RTW) **Median number of days of sick leave covering a period of 6 months follow-up:** Low intensity back school: 68 High intensity back school: 85 Usual care: 75 **Hazard ratio for RTW at 6 months follow-up** Low intensity back school compared to usual care: HR: 1.4 (95 % CI 1.0 to 1.9), p=0.06 Low intensity back school compared to high intensity back school: HR: 1.3 (95 % CI 1.0 to 1.8), p=0.09 High intensity back school compared to usual care: HR: 1.0 (95 % CI 0.8 to 1.4), p=0.83 Secondary **Mean (SD) for Function at 6 months follow-up ns** Low intensity back school: 6.9 (0.6) High intensity back school: 7.8 (0.6) Usual care: 7.9 (0.6) n.s for all comparisons **Mean (SD) for Pain at 6 months follow-up ns** Low intensity back school: 3.5 (0.3) High intensity back school: 3.9 (0.4) Usual care: 4.0 (0.3) n.s for all comparisons **Mean (SD) for Kinesiophobia at 6 months follow-up ns** Low intensity back school: 36.6 (0.8) High intensity back school: 37.9 (0.8) Usual care: 36.8 (0.8) n.s for all comparisons
Risk of bias	Moderate
Comments	

Hlobil et al. 2005 and Staal et al. 2004

Author	Hlobil et al.
Year	2005
Country	The Netherlands
Reference	[42] (12 months follow-up)
Author	Staal et al.
Year	2004
Country	The Netherlands
Reference	[43] (6 months follow-up, not tabulated)
Study design	RCT
Setting	Carried out in the occupational health services department of the Royal Dutch Airlines (KLM) at Schiphol Airport.
Recruitment	Workers employed by KLM who were sick listed between the 1st of April 1999 and the 1st of January 2001 because of lower back pain (LBP) were referred to the occupational physician (OP) for medical evaluation.
Population	Nonspecific LBP for at least 4 weeks prior to inclusion Age mean (SD), intervention 39 (9), control 37 (8) Sex male/female: Intervention 64/3, control 62/5 Full and partial sick leave
Follow-up	12 months
Intervention	Graded activity intervention given by a physiotherapist. Consisting of 60 minutes exercise sessions given twice a week until the workers achieved full return to regular work, or when the maximum therapy duration of 3 months had been completed.
Participants (n)	67
Drop-outs (n, %)	7, 10.4 %
Comparison	CAU
Participants (n)	67
Drop-outs (n, %)	7, 10.4 %
Statistical analysis /adjustments	The effect of the GA intervention on sick leave was analysed by means of survival analysis. Kaplan–Meier curves were used to describe the distribution of duration of the initial post-randomisation period of sick leave. A Cox multivariable regression model was used to estimate hazard ratios for RTW and 95 % confidence intervals. The effects of the GA intervention on functional status and pain severity at the 12-month follow-up were analysed by means of linear regression analysis.
Outcomes	Total number of days of sick leave due to LBP, functional status, and severity of pain. Describe missing data from outcomes or imputation or sensitivity analysis/drop-out analysis

Missing data	14 workers withdrew from the trial or did not show up for the follow-up measurements.
Results	**Days of sick leave, RTW** The graded activity group returned to work faster with a median of 54 days compared to 67 days in the usual care group. The graded activity intervention was more effective after approximately 50 days post-randomisation (HR = 1.9, CI =1.2–3.1, p = 0.01). **Functional status** No effects of the graded activity intervention were found for functional status. **Severity of pain** No effects of the graded activity intervention were found for pain.
Risk of bias	Risk of bias RTW: Moderate Risk of bias functional status: Moderate Risk of bias pain: Moderate
Comments	There is a study reporting results at six months follow-up for same populations [43], but results are not tabulated.

Hoff et al. 2022

Author	Hoff et al.
Year	2022
Country	Denmark
Reference	[44]
Study design	Multisite RCT
Setting	Primary care and job centers in the municipalities
Recruitment	Case managers at municipal job centers referred absentees for trial eligibility assessment if they suspected a mental health issue as the main cause of sick leave; between May 2016 and April 2018, 666 participants were randomised to one of the three study arms (n = 22 subsequently excluded, n = 8 withdrew consent).
Population	Patients receiving sick leave benefits (full or partial, regardless of employed/unemployed) for at least 4 weeks due to (1) stress, as defined by the 4DSQ distress-subscale, (2) adjustment disorder according to ICD-10, or (3) exhaustion disorder according to the definition from the Swedish National Board of Health and Welfare Age, overall (mean, SD): 45 (10) years Female, overall (%): 77 % Employed, overall: about 85 % All participants were on sick leave at baseline (full/partial not specified).
Follow-up	At 6, 12 and 24 months (24-month data will be reported elsewhere).
Intervention	Integrated intervention (INT) Received IBBIS (Integrated Health Care and Vocational Rehabilitation for Sick-Leave Benefits Recipients) mental healthcare, a manualised stepped care programme, and IBBIS vocational rehabilitation, inspired by existing vocational interventions such as Individual Placement and Support, problem solving therapy, and SHARP-at-work; focused on rapid, stepwise RTW and prevention of sick leave relapse; the mental healthcare and vocational rehabilitation was integrated through a range of integration activities involving participant, care manager and employment specialist
Participants (n)	223 (210 analysed)
Drop-outs (n, %)	At least 13 (6 %)
Comparison 1	Improved mental healthcare group (MHC) Received IBBIS mental healthcare as the INT group; included stress-coaching and mindfulness-based stress reduction; delivered by care managers with at least one year of experience in mental health care; any vocational rehabilitation was delivered through the job centers (i.e., not integrated)
Participants (n)	225 (220 analysed)
Drop-outs (n, %)	At least 5 (2 %)
Comparison 2	Service as usual (SAU) Received mental healthcare delivered by or via their GP, private psychologist or psychiatrist, no healthcare was provided in the job centers; job centers offered standard vocational rehabilitation,

	including management of the sickness benefit case, occasional assessment of workability, miscellaneous short-term, programs with instruction/support for job searching
Participants (n)	218 (206 analysed)
Drop-outs (n, %)	At least 12 (5.5 %)
Statistical analysis /adjustments	All analysis were based on ITT-principles, missing data on self-report questionnaires were imputed Primary: Cox proportional hazard regression, and logistic regression to estimate odds ratios, adjusted for employment status, first vs last half of randomised individuals, and IBBIS team allocation. Secondary: Linear mixed-effects models. Due to 3-armed design, reporting 98.3 % confidence intervals to Bonferroni correct the type I error risk
Outcomes	Vocational outcomes at 12 months (register data): Time to stable RTW (defined as beginning four consecutive weeks of salaried work) Proportion in work Mean (SD) weeks of work Self-report data outcomes at 12 months (questionnaires): Symptoms (Beck Anxiety Inventory, BAI; Beck Depression Inventory, BDI; Perceived Stress Scale, PSS; Karolinska Exhaustion Disorder Scale, KEDS; Four-Dimensional Questionnaire, 4DSQ: somatisation, distress, depression) Functioning (Work and Social Adjustment Scale, WSAS) Presenteeism (Stepford Presenteeism Scale, SPS) Self-efficacy (Illness Perception Questionnaire, IPQ; Generalised Self-Efficacy Scale, GSE; return-to-work-self efficacy, RTW-SE) Life quality (QoLs, EQ5DL)
Missing data	Vocational register outcomes: none Self-report data: not clearly reported, missing values were imputed.
Results	<u>Vocational outcomes</u> No differences were detected between INT and MHC on time to stable RTW at 12 months, but SAU was superior to both INT (HR 1.43, P=0.002) and MHC (HR 1.35, P=0.008). SAU was also superior to MHC on weeks in work at 12 months (risk ratio (RR) 1.24, P=0.003) and proportion in ordinary work at 12 months (odds ratio (OR) 1.78, P=0.005). While MHC and INT showed no difference on any other vocational outcome, SAU was superior to INT on weeks in work at 12 months (RR 1.22, P=0.007) but not proportion in ordinary work at 12 months (OR 1.26, P=0.27). <u>Self-report data outcomes</u> At the 12-month follow-up, the only difference observed across all outcomes and group comparisons was symptoms of exhaustion, lower in the MHC group, compared to SAU (difference on KES: 3.49, P=0.029). On all self-efficacy outcomes, life quality outcomes, and presenteeism, no differences were observed between groups at either 6 or 12 months.

Risk of bias	Moderate for all outcomes
Comments	Subgroup analyses according to diagnosis from medical records (SMDs, other health problems, somatic problems) are also reported, but not tabulated here.

Hoff et al. 2022

Author	Hoff et al.
Year	2022
Country	Denmark
Reference	[45]
Study design	Multisite RCT
Setting	Primary care and job centers in the municipalities.
Recruitment	Case managers at municipal job centers referred absentees for trial eligibility assessment if they suspected a mental health issue as the main cause of sick leave; between April 2016 and April 2018, 631 participants were randomised to one of the three study arms (8 withdrew consent; 14 excluded due to randomisation error).
Population	Patients receiving sick leave benefits (full or partial, regardless of employed/unemployed) for at least 4 weeks due to depression, generalised anxiety disorder, social phobia, or panic disorder. Age, overall (mean, SD): 41.9 (10.8) years Female, overall (%): about 73 % Employed, overall: about 77 % All participants were on sick leave at baseline (full/partial not specified).
Follow-up	At 6, 12 and 24 months (24-month data will be reported elsewhere).
Intervention	Integrated intervention (INT) Received "Integrated Health Care and Vocational Rehabilitation for Sick-Leave Benefit Recipients" (IBBIS), which integrate best practice mental healthcare and best practice vocational rehabilitation; the mental healthcare and vocational rehabilitation were integrated by 1) co-location, 2) early in course, at least one physical meeting, and 3) together forming a joint plan involving participant, care manager and employment specialist.
Participants (n)	213 (206 analysed)
Drop-outs (n, %)	Register data: 0 (0 %); self-report data: 31 (12.6 %).
Comparison 1	Improved mental healthcare group (MHC) Received IBBIS mental healthcare as the INT group, plus vocational rehabilitation at job centers (i.e., not integrated); delivered by care managers with at least one year of experience in mental health care.
Participants (n)	208 (200 analysed)
Drop-outs (n, %)	Register data: 0 (0 %); self-report data: 62 (28.9 %).
Comparison 2	Service as usual (SAU) Received mental healthcare delivered by their GP; job centers offered standard vocational rehabilitation, primarily including various short-term programs with instruction and support for job searching.
Participants (n)	210 (203 analysed)
Drop-outs (n, %)	Register data: 0 (0 %); self-report data: 72 (33.8 %)

Statistical analysis /adjustments	All analysis were based on ITT-principles, adjusted for the interaction of diagnosis and intervention Primary: Cox proportional hazard regression, and logistic regression to estimate odds ratios. Secondary: Linear mixed-effects models.
Outcomes	Vocational outcomes at 12 months (register data): Time to stable RTW (defined as beginning four consecutive weeks of salaried work) Proportion in work Mean (SD) weeks at work Self-report data outcomes at 12 months (questionnaires): Symptoms (Beck Anxiety Inventory, BAI; Beck Depression Inventory, BDI; Perceived Stress Scale, PSS; Karolinska Exhaustion Disorder Scale, KEDS; Four-Dimensional Symptom Questionnaire, 4DSQ) Functioning (Work and Social Adjustment Scale, WSAS) Presenteeism (Stepford Presenteeism Scale, SPS) Self-efficacy (Illness Perception Questionnaire, IPQ; Generalised Self-Efficacy Scale, GSE; return-to-work-self efficacy, RTW-SE) Life quality (Quality of Life Scale, QoLs; EQ5DL)
Missing data	Vocational register outcomes: none Self-report data: 13 % to 34 % in the three study arms.
Results	<u>Vocational outcomes:</u> For time to RTW at 12 months, no differences were found between the groups. However, INT had a higher proportion in work (56.2 %) compared with MHC (43.7 %) and SAU (45 %) (MHC vs INT: OR 0.59, p=0.012, 98.3 % CI 0.36 to 0.98; SAU vs INT: OR 0.64, p=0.0293, 98.3 % CI 0.39 to 1.05); MHC did not differ from SAU. No differences were found for weeks in work. <u>Self-report data outcomes</u> All outcomes at 12 months showed no differences.
Risk of bias	Moderate for all outcomes
Comments	

Huibers et al. 2004 and Leone et al. 2006

Author	Huibers et al.
Year	2004
Country	The Netherlands
Reference	[46]
Author	Leone et al.
Year	2006
Country	The Netherlands
Reference	[47]
Study design	RCT
Setting	Working population
Recruitment	Recruitment was carried out in collaboration with a local occupational health service, monitoring a working population of 80 000. Based on screening questionnaire potential candidates were invited for assessment of eligibility, which were severe fatigue and absenteeism for 6-26 weeks. Out of 4 242 responding, 2 290 were not eligible and 1 788 refused participation. 13 did not attend first visit. 151 persons were randomised to CBT-group (n=76) or Control group (n=75).
Population	Age means (SD), CBT-group 43.6 (8.9), control group 43.3 (7.7) Sex male/female: Intervention 49 %/51 %, control group 41 %/59 %
Follow-up	12 months (Huibers et al., [46]), 48 months (Leone et al. [47])
Intervention	CBT group received 5-7, 30-minute sessions with cognitive behaviour therapy over the course of 4 months.
Participants (n)	76
Drop-outs (n, %)	Completed treatment according to protocol n=51. 67 %. Analysed n=70, 92 %. Analysed at 48 months: 88 %
Comparison	No research intervention, but participants were free to visit regular GP for usual care.
Participants (n)	75
Drop-outs (n, %)	Analysed n=68, 91 %. Analysed at 48 months: 83 %
Statistical analysis /adjustments	ITT. Chi square and t-test. 48-month follow-up: mixed linear regression.
Outcomes	Work resumers %. Registered absenteeism (days) Physical functioning (Physical functioning subscale of SF 36) Psychological distress (Symptoms Checklist 90, SCL-90)

Missing data	Unclear, likely 91 % and 92 % in intervention and control group.
Results	Results at 12 months **Work resumers:** Intervention group 59 % vs control group 65 %. Difference -6 % (-23 to 10) **Registered absenteeism, mean days (SD)** Intervention group 234 (116) vs control group 230 (116). Difference 4 (-36 to 44)) **Physical functioning, mean (SD) (Physical functioning subscale of SF 36, higher score= better functioning)** Intervention group 70.1 (24.7) vs control group 77.4 (20.9). Difference -3.6 (-10.4 to 3.1). **Psychological distress** Intervention group 152 (51) vs control group 153 (62). Difference -11.4 (-27.1 to 4.3). **48-month follow-up:** There was no significant difference on fatigue and absenteeism.
Risk of bias	Risk of bias RTW outcomes: Low Risk of bias for functional and psychological assessments: Low 48-month follow-up: all outcomes: Moderate
Comments	

Jensen et al. 2001 and Jensen et al. 2005

Author	Jensen et al.
Year	2001
Country	Sweden
Reference	[48]
Author	Jensen et al.
Year	2005
Country	Sweden
Reference	(3-year follow-up) [49]
Author	Busch et al.
Year	2011
Country	Sweden
Reference	[17] (10-year follow-up)
Study design	Multicentre RCT
Setting	Selected rehabilitation clinics in four Swedish cities
Recruitment	Between May 1995 and October 1999, subjects on sick leave (n = 2 104) identified in a nationwide health insurance scheme were screened for eligibility and randomised (n = 214) to one of four conditions
Population	Currently and continuously sick-listed (1 to 6 months) due to long-term non-specific spinal pain Age (mean, SD), total sample: 43.3 (10.4) years Female (%), total sample: 55 % Sick leave: all were on sick leave at baseline (full/partial not stated)
Follow-up	Jensen et al. 2001 [48]: Pre-treatment, post-treatment, 6 months, 18 months Jensen et al. 2005 [49]: 36 months (3 years)
Intervention	Behaviour-oriented physical therapy (PT) All treatment conditions were given in groups with 4-8 individuals for 4 weeks, included examination and consultations from a physician, 2 sessions with a psychologist, 2 sessions with PT on ergonomics, and 2 sessions with physician on medical aspects of chronic spinal pain, visits to workplace and planning with the work managers, plus six 90-minutes booster sessions during one-year post-treatment In addition to this group-based and multi-disciplinary protocol, the PT intervention was carried out on part-time basis (20 hrs/week), aimed at facilitating a lasting behaviour change, and introduced an individually tailored training program with homework.
Participants (n)	54
Drop-outs (n, %)	6 (11 %)
Comparison 1	Cognitive behavioural therapy (CBT) In addition to the group-based multi-disciplinary protocol common for all treatment condition (see above), the CBT intervention comprised 13-14 hours/week, and was aimed at improving ability to manage pain and to resume a normal level of activity; included activity planning and goal setting,

	problem solving, applied relaxation, cognitive coping techniques, activity pacing, the role of vicious circles and how to break them, the role of significant others and assertion training
Participants (n)	49
Drop-outs (n, %)	8 (16 %)
Comparison 2	Behavioural medicine rehabilitation consisting of PT + CBT (BM) In addition to the group-based multi-disciplinary protocol common for all treatment condition (see above), the BM intervention was given on full-time basis and included both the PT and the CBT programs
Participants (n)	63
Drop-outs (n, %)	14 (22 %)
Comparison 3	Treatment as usual (control group, CG) Not offered any types of interventions in the research project, but were subjected to the normal routines in health care.
Participants (n)	48
Drop-outs (n, %)	None reported
Statistical analysis /adjustments	ITT analysis of variance, Cox regression, and logistic regression; in the analyses of sick-leave, sick leave the quarter before randomisation was adjusted for, in the analyses of SF-36, pre-treatment values were adjusted for:
Outcomes	Sick leave Early retirement Health-related quality of life: Short Form Health Survey, SF-36, eight construct scales ranging from 0 to 100 (higher = better); here, only results from the global score is reported (calculated as the mean of the eight construct scales) Cost for production losses (in the 3-year follow-up study, [49])
Missing data	None for sick leave and disability pension data (register data) For SF-36, overall non-response rate was 10.8 % at 6 months; at 18-months, non-response rates per condition were 0 % for PT, 9.8 % for CBT, 8.2 % for BM, and 20.8 % for CG; at 3 years, non-response rates ranged from 7 % to 42 % which was assessed to introduce high risk of bias – thus no 3-year data from SF-36 is reported here.
Results	<u>Primary (RTW)</u> **Total absence from work over 18 months (days)** None of the treatment conditions differed significantly from the control group. **Total absence from work over 3 years, days (SD)** In the ITT-analyses, none of the treatment conditions differed significantly from the control group. **HR for shorter duration of absence from work during the 18 months follow-up period** <u>Women</u>: HR (95 % CI), compared to CG Behaviour-oriented physical therapy (PT): 1.1 (0.6 to 1.9)

	Cognitive behavioural therapy (CBT): 1.0 (0.5 to 1.8) Behavioural medicine rehabilitation consisting of PT + CBT (BM): 1.2 (0.7 to 2.2) Men: HR (95 % CI), compared to CG Behaviour-oriented physical therapy (PT): 1.3 (0.6 to 2.7) Cognitive behavioural therapy (CBT): 0.5 (0.3 to 1.1) Behavioural medicine rehabilitation consisting of PT + CBT (BM): 1.1 (0.6 to 2.0) (No differences were statistically significant). **Duration of absence from work during the 3-year follow-up period** In the ITT-analyses, no significant differences in rate of return to work was found for women or men (no data reported). Secondary **SF-36, global health score (SD) at 6 months** No significant differences between conditions **SF-36, global health score (SD) at 18 months** Women: Behaviour-oriented physical therapy (PT): 47.2 (24.7), NS compared with CG Cognitive behavioural therapy (CBT): 58.2 (18.4), p=0.004 compared with CG Behavioural medicine rehabilitation consisting of PT + CBT (BM): 53.1 (24.5), p=0.016 compared with CG. Treatment as usual (control group, CG): 43.4 (20.1). Men: NS compared with CG for all interventions.
Risk of bias	[48] (6- and 18-month data): RTW and HR QoL – Moderate risk [49] (3-year data): RTW – Moderate risk; HR QoL - High risk due to attrition (thus not reported here).
Comments	[48]: As results differed between men and women, gender-differentiated analyses are reported. The 3-year follow-up [49] also included an economic analysis which compared the cost of the interventions to the impact on indirect costs due to loss of production. This analysis was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Jensen et al. 2011, 2012 and Pedersen et al. 2018

Author	Jensen et al.
Year	2011
Country	Denmark
Reference	[48]
Author	Jensen et al. (two year follow-up)
Year	2012
Country	Denmark
Reference	[50]
Author	Pedersen et al.
Year	2018 (five year follow-up)
Country	Denmark
Reference	[51]
Study design	RCT
Setting and recruitment	General practitioners in 4 municipalities were encouraged to refer patients to the study at the Research Unit of the Spine Center if the patients were aged 16 to 60 years and partly or fully sick-listed from work for 4 to 12 weeks because of low back pain. Of 417 referred 351 were eligible and were randomised to brief intervention or multidisciplinary intervention.
Population	351 on sick leave (between 3 to 16 weeks) due to low back pain. Age, mean (SD): Multidisciplinary intervention 42.1 (10.5) Age, mean (SD): Brief intervention 41.9 (10.8) Female (%): Brief intervention 50.3 %; Multidisciplinary intervention = 54.0 %
Follow-up	12 months, 24 months (second publication), 60 months (third publication).
Intervention	Multidisciplinary intervention. Standard clinical low back pain examination by physician, advice. Physiotherapy examination, advice, and follow-up. Same as in brief intervention. In addition, the multidisciplinary group received interviews with case manager. Participant and case manager together created tailored rehabilitation plan aiming at full return to work. Plan involved meetings with multidisciplinary teams (rehabilitation physician, specialist in clinical /social medicine, physiotherapist, social worker, and occupational therapist.
Participants (n)	n = 176
Drop-outs (n, %)	Drop-outs (not completing program) 2.8 %.
Comparison	Brief intervention Standard clinical low back pain examination by physician, advice. Physiotherapy examination, advice, and follow-up.
Participants (n)	n = 175
Drop-outs (n, %)	Drop-outs (not completing program) 1.1 %.

Statistical analysis /adjustments	ITT. Cox regression. Multiple regression adjusted for sex age, smoking, compensation claims, Roland Morris disability score and diagnosis).
Outcomes	Return to work (defined as first 4-week period after inclusion without social transfer payments) in 1- and 2-years follow-up. In 5-year follow-up outcome was changed to employment status assessed in two ways, categories, and work participation score.
Missing data	None
Results	12 months follow-up: During the first 52 weeks 133 (76.0 %) in the brief intervention and 125 (71.0 %) in the multidisciplinary intervention returned to work. Adjusted HR for return to work: HR 0.84 (0.65 to 1.08) 24 months follow-up: During two-year follow-up 140 (80.0 %) in the brief intervention and 136 (77.3 %) in the in the multidisciplinary intervention returned to work. Cox-regression (adjusting for gender and age) showed no group difference (HR not displayed, p=0.22). 5 years follow-up “Overall, there was no significant difference between participants in the brief and multidisciplinary interventions in relation to employment status during the five years follow-up”.
Risk of bias	RTW: Moderate Secondary outcomes (pain, anxiety, depression symptoms, QoL) not tabulated due to having high risk of bias.
Comments	

Keus van de Poll et al. 2020

Author	Keus van de Poll et al.
Year	2020
Country	Sweden
Reference	[52]
Study design	Cluster RCT
Setting	Occupational Health Services
Recruitment	Recruitment occurred between August 2015 and June 2017, in cooperation with the participating occupational health service (OHS).
Population	Individuals with common mental disorders (CMDs) or stress-related symptoms Age, mean (SD): Intervention 42.66 (10.39), control 44.00 (9.64) Female (%): intervention 90 %, control 73 % Sick leave (full/partial %): not all were on sick leave at baseline (proportions not stated)
Follow-up	6 and 12 months
Intervention	A work-directed intervention given by the OHS to employees. The focus of the intervention was primarily on adjusting the work situation (involving the employee´s manager in the discussions) and secondarily to give the employee advice concerning stress management
Participants (n)	41
Drop-outs (n, %)	7 (17 %)
Comparison	CAU Also work-directed and involving the employee´s manager, but not structured to the same degree nor based on the same theoretical framework.
Participants (n)	59
Drop-outs (n, %)	9 (15.3 %)
Statistical analysis /adjustments	Intention-to-treat analyses. To investigate the primary outcome, registered days of sickness absence, performed general estimated equations (GEE) using an independent correlation structure and robust variance estimation, was used. Cox regression was used to investigate group differences in time to full and partial RTW.
Outcomes	Primary: Registered sickness absence (sickness benefit and disability pension), defined as the total number of net absence days (all causes). Secondary: Self-reported sickness absence, RTW and production loss, mental/general health, sleep, work ability.
Missing data	16 lost to follow-up, did not respond.
Results	<u>Primary</u> **Registered sickness absence**

	Among the employees that received the intervention, 15 persons (36.6 %) had no registered sickness absence at all during the follow-up. Among the employees receiving CAU, this number was 22. (37.3 %). In total, the difference in estimated sickness days during the 12-month period was almost 15 days, to the advantage of PSI, the interaction between group and time was statistically significant (p=0.033). **Self-reported sickness absence** The number of self-reported sickness absence days during the follow-up period was also lower for PSI compared with CAU. **RTW** A total of 88 % in PSI and 76 % in CAU had fully returned to work 12 months after baseline, (HR=1.54; 95 % CI=0.78; 3.03). The intervention group had significantly earlier partial RTW at 5 and 8 months (HR 1.93; 1.05-3.56) but no difference at one year. Secondary **Stress, production loss due to ill health and production loss due to work environment** Improved over time, but no statistically significant interactions between group and time were found **Mental health, stress-related symptoms, sleep, and work ability** No statistically significant differences between groups at 12 months
Risk of bias	Risk of bias registered sickness absence: low Risk of bias self-reported sickness absence, RTW and production loss: Moderate Risk of bias: mental/general health, sleep, work ability: Moderate
Comments	Unclear proportion on sick leave at baseline.

Kool et al. 2007

Author	Kool et al.
Year	2007
Country	Switzerland
Reference	[53]
Study design	RCT
Setting	Inpatient rehabilitation center
Recruitment	From patients referred to the researcher´s rehabilitation center. Oral information about the trial to eligible patients referred for 3 weeks of inpatient rehabilitation.
Population	Recruitment period: January 2000 and May 2003. Patients between 20 and 55, primary diagnosis of nonacute (duration ≥6 weeks) nonspecific low back pain (LBP) and at least 6 weeks of sick leave in the previous 6 months.
Follow-up	12 months.
Intervention	**Function-centered treatment (FCT)** The multidisciplinary team providing FCT consisted of a rheumatologist, a physical and occupational therapist trained in ergonomics, a sports therapist, a social worker, and a nurse. FCT was based on work hardening and functional restoration programs for 4 hours a day for 3 weeks. The primary goal was to increase work-related capacity while emphasising improving self-efficacy. Treatment consisted of work simulation, strength, and endurance training through isokinetic exercise, cardiovascular training performed by walking and aqua aerobics, sports therapy, and self-exercise.
Participants (n)	n=87 21 % women Mean age±SD: 41.6±8.4 years
Drop-outs (n, %)	1 patient dropped-out during treatment. Additional 5 patients lost to follow-up. In total, all patients attended at least 90 % of the scheduled treatments.
Comparison	**Pain-centered treatment (PCT)** The multidisciplinary PCT team consisted of a rheumatologist, a physiotherapist, and a nurse, and the primary goal was pain reduction. The secondary goal was to decrease disability and improve return to work. The duration of treatment was 2.5 hours a day for 3 weeks. Physical therapy used individually selected mobilisation, stretching, strength training, and a 4-hour mini back school with education and exercise. Movement therapy in the pool, progressive muscle relaxation and pain-modulating treatments were used.
Participants (n)	n = 87 22 % women Mean age±SD: 42.5±8.4 years.

Drop-outs (n, %)	No patients dropped-out from treatment. 3 patients lost to follow-up. In total, all patients attended at least 90 % of the scheduled treatments.
Statistical analysis /adjustment	Intention-to-treat principle. Median number of workdays during the follow-up year in the two groups were compared with a Mann-Whitney U test, and standardised mean differences calculated. Logistic regression was used to analyse the odds for returning to work for ≥ 1 day. Negative binomial regression was used to analyse the number of workdays among patients returning to work for ≥ 1 day. The result is reported as incidence rate ratio (IRR) between groups for working ≥ 1 day. The influence of covariates (litigation, duration of sick leave before treatment, age, cultural background, education, workload, and job qualification) on the number of workdays in the 2 treatment groups was analysed. Addition of covariates did not change the overall treatment effect (OR) significantly. (Litigation, previous sick leave, and southeast European cultural background had negative effects on return-to-work OR).
Outcomes	**RTW:** Number of workdays in the follow-up year (accounted for time-reduced work). OR for returning to work from regression model (with/without covariates) IRR for number of working days among patients returning to work from negative binomial regression Rate of patients receiving unemployment benefits Rate of patients receiving permanent disability allowances.
Missing data	The number of workdays and the time restriction in the 1-year follow-up period was obtained for 82 of 87 (94 %) and 84 of 87 (97 %) of the patients in the FCT and PCT groups, respectively.
Results	**Number of workdays, mean (SD)** FCT: 118 (134) days PCT: 74 (114) days P= 0.011 **Proportion RTW (%)** FCT: 59.8 % PCT: 41.4 % OR (95 % CI) for RTW for FCT compared to PCT: 2.11 (1.15 to 3.85), p = 0.016 **Incidence rate ratio (IRR) for number of working days (95 % CI)** IRR (95 % CI) for FCT compared to PCT: 1.10 (0.77 to 1.57), p=0.586 **Permanent disability allowance after 1 year, n** (no statistical test presented) FCT: 32 of 87

	PCT: 38 of 87 **Unemployment rate after 1 year, %** FCT: 43 % PCT: 52 % OR (95 % CI) for unemployment for FCT compared to PCT: 0.69 (0.38 to 1.26), p=0.225
Risk of bias	Moderate for all outcomes
Comments	

Lambeek et al. 2010 and Lambeek et al. 2010

Author **Year** **Country** **Reference**	Lambeek et al. 2010 The Netherlands [54]
Author **Year** **Country** **Reference**	Lambeek et al. 2010 The Netherlands [55], cost-effectiveness analysis based on trial data. Details reported in Table of included health economic studies.
Study design **Setting** **Recruitment** **Population** **Follow-up**	RCT Patients were recruited in outpatient hospital clinics. The intervention was delivered within occupational care. Patients with low back pain who had visited an outpatient clinic in one of the participating hospitals received a letter from their medical specialist within one week of their visit informing them about the trial. A prepaid envelope was included for them to indicate their interest and check their eligibility for the study. A research assistant contacted potential participants by telephone. Those who met the inclusion criteria and were willing to participate were asked to give written informed consent. Adults with low back pain of more than 12 weeks duration. Employed or self-employed in a permanent and salaried position >8 hours/week, but presently absent or partially absent from work. Age (mean, SD): Integrated care = 45.5 (8.9) years; Usual care = 46.8 (9.2) years Female (%): Integrated care = 44 %; Usual care = 40 % 3, 6, 9, and 12 months
Intervention **Participants (n)** **Drop-outs (n, %)**	Integrated care. This consisted of a workplace intervention based on participatory ergonomics, involving a supervisor, and a graded activity programme based on cognitive behavioural principles. The integrated care was coordinated by a clinical occupational physician (OP) and provided by a team consisting of the clinical OP, a medical specialist, an occupational therapist, and a physiotherapist. 66 Not stated
Comparison **Participants (n)** **Drop-outs (n, %)**	Usual care Patients allocated to the usual care group received the usual treatment from their medical specialist, OP, GP, and/or allied health professionals. 68 Not stated
Statistical analysis /adjustments	RTW: • Kaplan-Meier analysis (including the log rank test) to describe the univariate association between group allocation and the duration of absence from work until the first continuous

	period of full sustainable return to work. Cox proportional hazard model to estimate hazard ratios for return to work. • Mann-Whitney U test to compare the total number of days of sick leave due to low back pain during the 12 months of follow-up between groups. Secondary outcomes: Longitudinal mixed models adjusted for type of hospital and strata to assess the differences between groups in improvement on secondary outcomes.
Outcomes	Primary outcome: Duration until sustainable RTW, defined as number of days of sick leave due to low back pain from the day of randomisation until full return to work in own or other work with equal earnings for at least four weeks without recurrence. Secondary outcomes: intensity of pain scored on a visual analogue scale; functional status assessed with the Roland disability questionnaire.
Missing data	Primary outcome: 7 % Secondary outcomes: 13 %
Results	Primary outcome: Median duration until sustainable RTW Integrated care: 88 days; Usual care: 208 days; P for difference =0.003 Results of Kaplan-Meier analysis: The difference between curves for integrated curve and usual care was significant (log rank test; P=0.004). Results of Cox proportional hazards model: HR for integrated care: 1.90 (95 % CI 1.18 to 2.76, P=0.004). Median number of days of sick leave during 12-months follow-up Integrated care: 82; Usual care: 175 days; P for difference =0.003 Secondary outcomes: Intensity of pain. No statistically significant differences in pain improvement were found between the two groups at 12 months. Mean improvement for integrated care 1.64 (0.35) versus 1.85 (0.36) for usual care; p for difference = 0.67. Functional status. In favour of the integrated care group. Mean improvement for integrated care 7.16 (0.71) versus 4.43 (0.72) for usual care at 12 months; p for difference = 0.01
Risk of bias	Moderate
Comments	Largest difference at 6 months indicating that the intervention resulted in quicker RTW. High relevance in the clinical and work setting and for HE perspectives.

Langagergaard et al. 2021 and Pedersen et al. 2022

Author	Langagergaard et al.
Year	2021
Country	Denmark
Reference	[56] (1-year data RTW)
Author	Pedersen et al.
Year	2022
Country	Denmark
Reference	[57] (2-year data RTW)
Study design	RCT
Setting	At the Spine Center, Silkeborg Regional Hospital (secondary care).
Recruitment	Between March 2011 and August 2016, participants from 13 municipalities were recruited through general practitioners (GPs).
Population	Patients on partial or full sick leave for 4-12 weeks because of low back pain (with or without radiculopathy). The patients were divided according to work relation, into: Weak job relations and no compensation claim (n=204) Strong job relations and/an ongoing compensation claim (n=272) Mean (SD) age was 43.1 (9.8) years. Female (%): 53 %.
Follow-up	1 year
Intervention	Brief intervention (BI) included examination and advice by a rheumatologist and a physiotherapist. Examination included magnetic resonance imaging of the spine and a clinical low back examination performed by a rheumatologist. Participants with non-specific low back pain were informed about exercise and training being the best documented treatment and psychological distress possibly worsening pain. In addition, pain medicine was adjusted when needed, and all participants were advised to resume work when possible.
Participants (n)	239
Drop-outs (n, %)	n= 73, 31 %
Comparison	Multidisciplinary intervention (MDI) included brief intervention plus coaching by a case manager who cooperated with a multidisciplinary team planning for RTW with the patient
Participants (n)	237
Drop-outs (n, %)	n =59, 25 %
Statistical analysis /adjustments	Cox regression analysis to compare return to work rates by means of hazard ratio in the two intervention groups in both strata.
Outcomes	Primary outcomes were 1-year RTW rate [56] and time to RTW [57], (register data); (RTW operationalised as not receiving any social transfer income except unemployment benefits or flexible job compensation for at least four consecutive weeks).

	Secondary vocational outcomes [57] (register data): Cumulative incidence proportion (CIP) of participants having RTW during the 2-year follow-up Sustainable RTW (defined as the percentage of participants working during the last 4 weeks up to the 2-year date after randomisation). Median time to RTW within five different work status groups (not tabulated here).
Missing data	132 did not complete the one-year follow-up questionnaire; for the 2-year questionnaire 33 % were non-responders (high risk of bias for secondary health and disability outcomes).
Results	HR for RTW at 1 year: Among 272 participants with strong job relations, RTW was achieved for I04/I37 (76 %) receiving brief intervention compared to 89/135 (66 %) receiving multidisciplinary intervention, hazard ratio 0.73 (Cl: 0.55 to 0.96). Corresponding results for 204 participants with weak job relations were 69/102 (68 %) in both interventions, hazard ratio 1.07 (Cl: 0.77 to 1.49). HR for RTW at 2 years: Within the stratum of strong job relations, participants receiving brief intervention had significantly higher RTW rate than participants receiving multidisciplinary intervention: Strong job relations: HR (95 % CI) 0.74 (0.57 to 0.96) Weak job relations: HR (95 % CI) 0.99 (0.73 to 1.34) Time to RTW, median number of weeks (CI): Strong job relations: BI 22 (18 to 25) weeks; MDI 30 (23 to 38) weeks ($p < 0.05$) Weak job relations: BI 29 (25 to 42) weeks; MDI 33 (23 to 40) weeks (NS) CIP of participants having RTW during the 2-year follow-up, % (CI): Strong job relations: BI 87 (81 to 93) % ; MDI 79 (72 to 86) % ($p < 0.05$) Weak job relations: BI 81 (74 to 89) %; MDI 79 (71 to 87) % (NS) Sustained RTW, % (n) Strong job relations: BI 70 % (n = 96); MDI 61 % (n = 82) Weak job relations: BI 53 % (n = 54); MDI 51 % (n = 52) (Reported in text to be NS, no p-value given)
Risk of bias	Moderate for RTW (both 1-year and 2-year data) High for secondary health and disability outcomes (thus not tabulated).
Comments	

Lindell et al. 2008

Author	Lindell et al.
Year	2008
Country	Sweden
Reference	[58]
Study design	RCT
Setting	Primary care
Recruitment	Participants were primary care patients recruited by 42 family doctors at 12 health centers.
Population	125 in working age (up to and including 59 years) on sick leave for back and neck pain at least 6 weeks and at the most 2 years. Age, mean (95 % CI): Rehabilitation group 42.2 years (39.8 to 44.6) Age, mean (95 % CI): Primary care group 43.0 years (40.4 to 45.7) Female (%): Intervention group 52 %; Primary care group= 56 %
Follow-up	18 months
Intervention	Cognitive behavioural rehabilitation A team including physician, physiotherapist, psychologist, or a social worker trained in cognitive behaviour therapy and a health care adviser provided mapping of obstacles, education in relaxation, graded activity, and – if needed – manual therapy. Interventions were individualised.
Participants (n)	63
Drop-outs (n, %)	N = 2 (deceased), 3 %
Comparison	Primary care Usual care at primary care center.
Participants (n)	62
Drop-outs (n, %)	None
Statistical analysis /adjustments	ITT Cox regression and mixed linear modelling.
Outcomes	**Return to work share,** defined as the percentages of patients who regained any degree of work ability for at least 30 days in succession over 18 months. **Return to work chance**, defined as chance – expressed as HR, of achieving any degree of work ability, irrespective of the duration of that work ability, over 18 months. **Net sick days** over 18 months (defined as days of sick leave * degree of sick leave. 2 persons died in rehab-group.
Missing data	**Return to work share at 18 months**

Results	Rehab group 57 % Primary care group 57 n.s. **Return to work chance**, rehab groups vs primary care group: HR: 1.2 (0.7 to 2.0) at 12 months **Return to work chance**, rehab groups vs primary care group: HR: 1.6 (0.7 to 3.6) at 18 months **Net sick days at 18 months:** Rehab group 397 Primary care group 391 n.s.
Risk of bias	Moderate
Comments	

Malmberg Gavelin et al. 2018

Author	Malmberg Gavelin et al.
Year	2018
Country	Sweden
Reference	[59]
Study design	RCT
Setting	The Stress and Rehabilitation Clinic at the University Hospital in Umeå, Sweden
Recruitment	All patients referred to the Stress and Rehabilitation Clinic were screened for eligibility from April 2010 until June 2013. Additionally, eight patients were recruited from the Social Insurance Agency in Umeå, Sweden to speed up the recruitment process.
Population	Patients diagnosed with exhaustion disorder. Age, mean (SD): Cognitive training 43.89 (9.21); Aerobic training 44.15 (8.60); Control group 41.88 (7.41) Sex, n female/male: Cognitive training 34/10; Aerobic training 39/8; Control group 38/3 Sick leave (full/partial %)
Follow-up	12 months
Intervention 1	Multimodal stress rehabilitation program (MMR) in combination with computerised cognitive training. The MMR consisted of 22 weekly three-hour group sessions based on cognitive behavioural therapy. The computerised cognitive training program consisted of six tasks: two
Participants (n)	44
Drop-outs (n, %)	20 (45 %)
Intervention 2	MMR in combination with aerobic training consisting of 40 minutes indoor cycling conducted three times a week for 12 weeks.
Participants (n)	47
Drop-outs (n, %)	26 (55 %)
Comparison	MMR but no additional training.
Participants (n)	41
Drop-outs (n, %)	10 (24 %)
Statistical analysis /adjustments	Linear mixed-effects models were used to investigate the effects of the interventions on cognitive functioning, psychological health, work ability, and aerobic capacity.
Outcomes	Work ability was measured with sick leave data from a register. Cognitive performance was tested with a test battery assessing executive functioning, working memory, episodic memory, perceptual speed, reasoning ability and cognitive training criterion task. Psychological variables were measured with self-reported data. Aerobic capacity was assessed as maximal oxygen uptake.
Missing data	Drop-out analysis were done for each group.
Results	Primary outcome defined by the authors

	Change in cognitive performance from preintervention to one-year follow-up: Estimates represents the average difference in change between intervention group and control group. Control group is reference. A positive value indicated improved performance. Global cognitive score: Cognitive training= 0.21 (95 % CI 0.03 to 0.39, p=0.02) Aerobic training= 0.06 (95 % CI -0.11 to 0.24, p=0.48) Executive function: Cognitive training= 0.04 (95 % CI -0.26 to 0.35, p=0.78) Aerobic training= 0.10 (95 % CI -0.21 to 0.40, p=0.52) Working memory: Cognitive training= 0.25 (95 % CI -0.06 to 0.55, p=0.11) Aerobic training= -0.05 (95 % CI -0.36 to 0.26, p=0.76) Episodic memory: Cognitive training= 0.32 (95 % CI -0.12 to 0.76, p=0.15) Aerobic training= 0.33 (95 % CI -0.11 to 0.77, p=0.14) Perceptual speed: Cognitive training= 0.18 (95 % CI -0.15 to 0.51, p=0.27) Aerobic training= 0.11 (95 % CI -0.23 to 0.44, p=0.54) Reasoning ability: Cognitive training= 0.28 (95 % CI -0.23 to 0.78, p=0.29) Aerobic training= -0.12 (95 % CI -0.63 to 0.39, p=0.65) Cognitive training criterion task: Cognitive training= 0.88 (95 % CI 0.29 to 1.47, p=0.004) Aerobic training= 0.12 (95 % CI -0.49 to 0.72, p=0.71)
Risk of bias	Change in cognitive performance: Moderate Work ability (RTW): Not tabulated due to high risk of bias Psychological variables: Not tabulated due to high risk of bias Aerobic capacity: Not tabulated due to high risk of bias
Comments	

Marhold et al. 2001

Author	Marhold et al.
Year	2001
Country	Sweden
Reference	[60]
Study design	RCT
Setting	The treatment program was given at the Department of Psychology at Uppsala University. Group format with six patients in each group.
Recruitment	Patients were recruited consecutively from a register that listed persons on sick leave, managed by the National Insurance Authority in Uppsala, Sweden.
Population	Women between 25 and 60 years old, a diagnosis of musculoskeletal pain, no psychotic illness, no planned operations, and being gainfully employed. Mean age (SD): 46 (9) Female: 100 % Proportion on long-term (>12 months) sick leave: 36 of 72 patients Proportion on short-term (2-6 months) sick leave: 36 of 72 patients Average duration of pain for long-term patients: 48 months Average duration of pain for short-term patients: 10 months Proportion with neck- and shoulder pain: 58 % Proportion with lower back pain: 29 % (No significant differences between intervention groups in baseline characteristics. No significant difference between subgroups (long-term/short-term sick leave) in baseline characteristics, except for pain duration and sick leave.
Follow-up	6 months. (In the study, outcomes were also reported post-treatment, and at 2, 4 and 6 months after treatment).
Intervention	Cognitive-behavioural return-to-work program (CBP) Conducted by a clinical psychologist trained in cognitive-behaviour therapy, according to a treatment manual with primary aim to help patient to return to work, secondary to improve pain and quality of life. 12 weekly sessions á 2.5 hours + two booster sessions. First six sessions focused on pain coping skills, the last six on return-to-work and applying the pain coping skills. Of the patients in the cognitive-behavioural treatment condition, 59 % had visited a physician, 53 % a physiotherapist, 3 % a nurse, and 3 % an occupational therapist during the month before the posttreatment assessment.
Participants (n)	n = 36. Two subgroups: long-term (>12 months) sick leave (n=18), and short-term (2-6 months) sick leave (n=18).

Drop-outs (n, %)	The attrition rate for the sick leave data was 3 % for the whole group, for other outcome measures the attrition rate was 8 % for the whole group. Two patients dropped out from treatment in the intervention group.
Comparison	Treatment as usual The control group was offered treatment-as-usual, which did not include any cognitive-behavioural interventions. Of the control patients, 60 % had visited a physician, 50 % a physiotherapist, 15 % a nurse, 10 % an occupational therapist, and 6 % a psychologist during the month before the post-treatment assessment.
Participants (n)	n=36. Two subgroups: long-term (>12 months) sick leave (n=18), and short-term (2-6 months) sick leave (n=18).
Drop-outs (n, %)	The attrition rate for the sick leave data was 3 % for the whole group, for other outcome measures the attrition rate was 8 % for the whole group. Four persons did not complete all measurement occasions in the TAU group.
Statistical analysis /adjustment	The short-term and long-term subgroups were analysed separately. The treatment and control groups did not significantly differ on reported background variables. Means were compared with a repeated measures ANOVA, with 2 factors (treatment and control) and 4 time point (pre, post, and follow-up). Tukey's post hoc test was used to analyse differences between groups and between measurement occasions (even when the interactions Group x Time was not significant). The sign test used for overall analysis to compare the change scores (comparisons between pre-treatment and follow-up between groups, with the two subgroups analysed separately) for all outcome measurement scales except sick leave.
Outcomes	Number of days on sick leave over periods of 2 months. (Data on sick leave was derived from the National insurance Authority. For part-time sick leaves, the number of days on sick leave were adjusted according to work percentage to form full sick leave days). Self-reported (assessed before start of program, post treatment, and at follow-up). Multidimensional Pain inventory (MPI), 13 subscales The Coping Strategies Questionnaire (CSQ), 10 subscales The Beck Depression Inventory (BDI) The Pain and Impairment Rating Scale (PAIRS) Disability Rating Index (DRI)
Missing data	No information on the handling of missing data.
Results	**Number of days on sick leave over 2-months periods at 6 months follow-up** Subgroup on short-term sick leave, effect in group over time (Interaction Group x Time) CBP: Significant TAU: Not significant

	Group difference: CBP significantly fewer days on sick leave Subgroup on long-term sick leave, effect in group over time (Interaction Group x Time) Effect of CBP: Not significant Effect of TAU: Not significant Group difference: Not significant **Mean of the MPI scales at pre-treatment and at follow-up (13 subscales)** No significant results except a significant interaction (Treatment x Time) for the short-term group for the general activity subscale. No significant group differences were shown. **Mean of the CSQ scales at pre-treatment and at follow-up (10 subscales)** No significant results except a significant interaction (Treatment x Time) for the pain control and ability to control pain subscales for the short-term group. In this subgroup a significant group difference in favour of the CBP group was observed for both pain control and ability to decrease pain. **Mean of the BDI scale at pre-treatment and at follow-up** No significant interaction effects. **Mean of the PAIRS scale at pre-treatment and at follow-up** No significant interaction effects. **Mean of the DRI scale at pre-treatment and at follow-up** No significant interaction effects. (The sign test showed significant, $P < 0.01$, differences between the treatment and control groups in favour of the treatment group from a follow-up fort the short-term group).
Risk of bias	Moderate for all outcomes. (Issues with reporting, but likely reasonably reliable).
Comments	

Moll et al. 2018

Author	Moll et al.
Year	2018
Country	Denmark
Reference	[61]
Study design	RCT
Setting	Outpatients in a hospital-based clinical study
Recruitment	Between May 2009 and January 2014, study information was displayed in waiting rooms of general practitioners (GPs), physiotherapists, and chiropractors in the primary sector in seven municipalities
Population	Workers on sick leave for 4-16 weeks due to pain in the neck, shoulder, or upper thoracic region Age (mean, SD): I = 40.0 (9.2) years; C = 42.2 (10.4) years Female (%): I = 69.4 %; C = 67.5 % Sick leave (full): I = 66.2 %; C = 82.4 % Sick leave (partial): I = 33.8 %; C = 17.6 %
Follow-up	12 months
Intervention	Multidisciplinary intervention (MDI). At baseline and follow-ups, clinical examination, and instructions on home-based physical exercises by rheumatologist and physiotherapist; individual meeting(s) with coordinating case manager to establish rehabilitation plan; if relevant, consultations with a psychologist; team conferences (not attended by patient); optional workplace involvement; median (IQR) duration of intervention 4.6 (3.3-7.4) months
Participants (n)	85
Drop-outs (n, %)	3 (3.5 %) (had RTW at baseline)
Comparison	Brief intervention (BI) At baseline and follow-ups, clinical examination, and instructions on home-based physical exercises by rheumatologist and physiotherapist; advice to resume work when possible and to consult GP, if needed; median (IQR) duration of intervention 3 (3-3) months
Participants (n)	83
Drop-outs (n, %)	1 (1.2 %) (had RTW at baseline)
Statistical analysis /adjustments	Cox proportional hazard regression, crude and adjusted for gender, age, sick-leave prior to inclusion, part-time sick-leave, and clinical diagnosis.
Outcomes	RTW: defined as the first period of four consecutive weeks of self-support or job supported by the social system (register data).
Missing data	Crude analyses n = 4 (2.3 %), adjusted analyses n = 18 (10.7 %)
Results	<u>RTW</u> **Number (%) RTW at 12 months**

	MDI: 50 (59 %) BI: 48 (58 %) **Hazard ratio for RTW MDI compared to BI** Crude HR: 0.94 (95 % CI 0.63 to 1.41) Adjusted HR: 0.84 (95 % CI 0.54 to 1.31) **Time to RTW (median, IQR)** MDI: 44 (18-52) weeks BI: 32 (12-52) weeks (p=0.83)
Risk of bias	RTW: Moderate Secondary outcomes (pain, disability, mental health) not tabulated due to high risk of bias
Comments	

Myhre et al. 2014 and Marchand et al. 2015

Author	Myhre et al.
Year	2014
Country	Norway
Reference	[62] (RTW)
Author	Marchand et al.
Year	2015
Country	Norway
Reference	[63] (secondary outcomes)
Study design	Multicentre RCT
Setting	Outpatients referred to specialist health care (two outpatient spine clinics)
Recruitment	Among sick-listed patients referred to the clinics between August 2009 and August 2011.
Population	Patients on sick leave for 1-12 months due to neck or back pain Age (mean, SD): I = 40.2 (9.7) years; C = 41.0 (10.0) years Female (%): I = 44.3 %; C = 48.5 % Sick leave (full): all on sick leave at baseline (full/partial not stated)
Follow-up	12 months
Intervention	Work-focused rehabilitation. Standard clinical examination and reassuring information from a physician; 7 sessions with physiotherapist; 4-5 lectures, 0-3 group discussions, and 2-3 individual appointments with a case worker with focus on the RTW process; optional workplace involvement for inquiry on possible temporary modifications at work; total duration of intervention 3 weeks
Participants (n)	209
Drop-outs (n, %)	6 excluded (incorrect randomisation) + 9 drop-outs immediately after randomisation (7.1 %), and 11 patients were non-compliant to the intervention.
Comparison	Multidisciplinary intervention (comprehensive or brief). Standard clinical examination and reassuring information from a physician; sessions with physiotherapist (17 in comprehensive, 1-2 in brief); in comprehensive, lectures and group discussions; total duration of intervention 3 weeks.
Participants (n)	204
Drop-outs (n, %)	2 excluded (incorrect randomisation) + 17 drop-outs immediately after randomisation (9.3 %) and 8 patients were non-compliant to the control intervention.
Statistical analysis /adjustments	ITT-analyses using survival analysis (Kaplan-Meier) and Cox proportional hazard regression (crude and adjusted for age, sex, and education) for RTW data; ITT-analyses using multiple imputation and independent sample t-test for secondary outcomes.
Outcomes	RTW: Defined as the first 5-week period after random assignment without sickness benefits, a work assessment allowance pension, or a disability pension, or return to partial disability status (self-reported in emailed questionnaire). Pain: 11-point numeric rating scale (0 = no pain, 10 = worst possible pain)

	Disability: Oswestry disability index (ODI) or Neck Disability Index (NDI) (0 % = no disability, 100 % = maximum disability).
Missing data	26 % did not return questionnaire at 1 year RTW: 8 (1.9 %) patients excluded due to incorrect randomisation, not included in ITT-analyses Secondary: after multiple imputation, about 96 % were analysed for pain and disability
Results	Primary (RTW) **Number (%) RTW at 12 months** Work-focused intervention: 142 (70 %) Multidisciplinary intervention: 152 (75 %) (No statistic test reported) **Hazard ratio for RTW Work-focused intervention compared to Multidisciplinary intervention** Crude HR: 0.91 (95 % CI 0.73 to 1.13) Adjusted HR: 0.94 (95 % CI 0.75 to 1.17) **Time to RTW (median)** Work-focused intervention: 161 days Multidisciplinary intervention: 158 days (p=0.45) **Total sick-leave days at 12 months (median)** Work-focused intervention: 117 days Multidisciplinary intervention: 107 days (No statistic test reported) Secondary **Pain, mean change (SD)** Work-focused intervention: 1.59 (2.70) Multidisciplinary intervention: 1.36 (2.88) 95 % CI for difference: -0.32 to 0.78 (p = 0.410) **Disability, mean change (SD)** Work-focused intervention: 8.80 (15.55) Multidisciplinary intervention: 9.02 (14.67) 95 % CI for difference: -3.21 to 2.76 (p = 0.881)
Risk of bias	RTW: Moderate Pain: Moderate Disability: Moderate

Comments	For RTW, subgroup analyses for gender showed non-significant results (data not shown). The multidisciplinary control intervention was brief (3 sessions) at one of the spine clinics and comprehensive (31 sessions) at the other clinic.

Nieuwenhuijsen et al. 2017

Author	Nieuwenhuijsen et al.
Year	2017
Country	The Netherlands
Reference	[64]
Study design	RCT
Setting	Outpatients in a research centre
Recruitment	Participants were referred by a general or occupational health professional, or self-referred.
Population	**Workers with work-related chronic stress complaints (diagnosed with neurasthenia) who were on sick leave (part-time or full- time)** Age (mean, SD): I = 43 (8.0) years; C1 = 47 (9.7) years; C2 = 40 (8.9) years Female (%): I = 72 %; C1 = 69 %; C2 = 66 % Sick leave (mean workhours RTW at baseline, % of contract hours): I = 7.3 %; C1 = 13.2 %; C2 = 6.9 %
Follow-up	6, 12 and 24 weeks
Intervention	Light therapy plus pulsed electromagnetic fields plus coaching (Group 1 – Intervention group) Participants lay down on a treatment platform, delivering light therapy through a combination of coherent and incoherent light, and generating weak magnetic fields; given for 12 weeks, twice a week for 40 mins; coaching performed using a standard guidance protocol with person-directed interventions to reduce burnout and to improve occupational mental health; given for 50 mins every fortnight during 12 weeks by a certified coach
Participants (n)	28 (after drop-out)
Drop-outs (n, %)	Not stated (overall drop-out n = 12, 12.5 %)
Comparison 1	Placebo treatment plus coaching (Group 2 – Placebo group) Same treatment condition as Group 1, but the light and magnetic field were switched off, only a non-effective, small dose of coherent/incoherent light was used to give the impression that the equipment was running
Participants (n)	28 (after drop-out)
Drop-outs (n, %)	Not stated (overall drop-out n = 12, 12.5 %)
Comparison 2	Coaching only (Group 3 – Control group) Received coaching only
Participants (n)	28 (after dro-pout)
Drop-outs (n, %)	Not stated (overall drop-out n = 12, 12.5 %)
Statistical analysis /adjustments	Analysis of variance (GLM repeated measures) if possible, otherwise non-parametric tests.
Outcomes	Primary: Percentage RTW (defined as the number of worked hours per week at the end of the study compared to the number of contracts hours at baseline), self-reported data.

	Secondary: Fatigue: emotional exhaustion (five items from the Dutch UBOS General; scale 0 to 6; higher = more emotional exhaustion). Fatigue: need for recovery after work (scores on 11 items transformed into a scale from 0 (no need for recovery) to 100 (maximum need for recovery)). Stress: distress scale (4DSQ, 16 items using 5-point response scale (0 = no, 4 = very often). Stress: stress hormone cortisol in hair. Quality of life: three dimensions from SF-36 (vitality, emotional role limitations, social functioning), scale 0 to 100 (higher = better).
Missing data	Only per protocol data reported.
Results	RTW **Percentage RTW at 24 weeks (median, IQR)** Intervention: 94.7 (80.6) % Placebo: 88.2 (58.5) % Control: 62.5 (72.3) % No significant between-groups effect over time was found (p = 0.92) Secondary outcomes **Fatigue, stress, quality of life** No significant between-groups effects were found.
Risk of bias	Moderate
Comments	

Noordik et al. 2013

Author	Noordik et al.
Year	2013
Country	The Netherlands
Reference	[65]
Study design	Cluster RCT
Setting	In the Netherlands most of the workers on sick leave due to common mental disorders (CMD) visit an occupational physician (OP). The OP offers RTW interventions to these workers according to the Dutch guidelines.
Recruitment	The participating occupational physician asked their clients of they wanted to participate in the study. Recruitment period: November 2006 – December 2007.
Population	Workers who were on sick leave due to CMD for ≥ 2 weeks and ≤ 8 weeks. CMD were defined as stress-related (according to Dutch guidelines for OP), adjustment, anxiety, or depressive disorders (the latter three classified according to the Diagnostic and Statistical Manual of Mental Disorders, DSM-IV). Female (%): RTW-E=76 %. CAU=67 %. Mean age (SD): RTW-E=44.9 (9.8) years. CUA=44.9 (9.9) years. Duration of sick leave before inclusion (SD): RTW-E=36 (13.2) days. CAU= 34.1 (13.3) days.
Follow-up	12 months. (In the study, outcomes were also reported after 3, 6 and 9 months).
Intervention	Exposure-based return-to-work (RTW-E) Workers received CAU and were gradually exposed in vivo to more demanding work situations structured by a hierarchy of tasks evoking increasing levels of anxiety, stress, or anger. The RTW-E program provided workers with several homework assignments aimed at preparing, executing, and evaluating an exposure-based RTW plan.
Participants (n)	**After randomisation** OPs: n=28 (level of randomisation) Workers: n=92 (these workers came with the OPs). **After worker enrolment** (the workers of the OPs were assessed after randomisation) OPs: n = 21 Workers: n = 75
Drop-outs (n, %)	28 of 75 workers were treated as intended in RTW-E group. (No statistical difference in the number of OP consultations between the groups).

	Primary outcome (Time to full RTW): 16 % (12 workers) lost to follow-up. Secondary outcomes: The loss to follow-up varied between 31 % to 56 %.
Comparison	Care as usual (CAU) The intervention is guideline-directed and consists of problem-solving strategies and graded activities.
Participants (n)	After randomisation OPs: n=28 (level of randomisation) Workers: n = 108 (these workers came with the OPs). After worker enrolment (the workers of the OPs were assessed after randomisation) OPs: n = 24 Workers: n = 85
Drop-outs (n, %)	(No statistical difference in the number of Op consultations between the groups). Primary outcome (RTW): 6 % (5 workers) lost to follow-up. Secondary outcomes: The loss to follow-up varied between 31 % to 56 %.
Statistical analysis /adjustment	Intention-to-treat analysis.
Outcomes	Primary outcomes (time-to-event) were analysed with Kaplan-Meier curves and Cox proportional hazards regression models. In the Cox regression, clustering with respect to the OP (the level of randomisation) was accounted for. Having an anxiety disorder was included as a covariate in the regression model (not found to be significant), and it was also tested if anxiety was an effect modifier by including an interaction between anxiety and time-to-full RTW (not found to be significant). Differences between groups were checked for significance with the Wald test. For the secondary outcomes somatistion and distress, group differences were evaluated with a linear mixed model (LMM) with three levels (OP, patient within OP, and measurements) of random effects, with the intercept and slope as a random effect at the patient level. For the secondary outcomes anxiety and depressive symptoms, group differences were evaluated with a generalised LMM assuming a Poisson distribution (due to many zero values), also with the intercept and slope as a random effect at the patient level. For evaluation of the intervention's effectiveness over time, relative mean change score for anxiety was calculated. Anxiety change scores were adjusted for effects of potential confounding in the association between the scores and interventions groups, e.g., from age and presence of mixed anxiety-depressive disorder (not found to be significant), and for the floor-effect of the scale. The differences in the anxiety change score between groups were evaluated by linear regression analysis.

	Primary The time-to-full return to work (RTW), calculated as the number of calendar days from the first day of sick leave to the first day of full RTW. Outcomes presented as hazard ratios and median time to full RTW. **Secondary** Time to partial RTW; The number of recurrences of sick leave; Symptoms of distress, anxiety, depression, and somatisation through the Four-Dimensional Symptoms Questionnaire (4DSQ, higher scores indicate more severe symptoms). Outcomes presented as median time to partial RTW, and mean outcomes at baseline and follow-up together with group effects from the regression models.
Missing data	No information of the handling of missing data. Since randomisation occurred at the level of the OP, and enrolment of participating workers was done after that, a proportion of participants were lost because they did not fulfil the inclusion criteria. These workers were not defined as lost during the study. Only workers that were lost after enrolment were defined as drop-outs. Data collection relied on the workers´ diaries and the OP's medical records (for RTW data), and questionnaires (for symptoms). Missing data for Questionnaires at baseline and at 12 months: RTW-E: 2 (3 %) and 24 (32 %) out of 75 CAU: 0 and 19 (23 %) out of 84 Missing data for RTW, workers' diary and medical record: RTW-E: 3 (4 %) and 13 (17 %) out of 75 CAU: 2 (2 %) and 4 (5 %) out of 84
Results	**Median time-to-full RTW (95 % CI)** RTW-E: 209 (162 to 256) days CAU: 153 (128 to 178) days (Significant difference between groups: P=0.02) **Hazard ratio for full-RTW** RTW-E: CAU = 0.55 (0.33 to 0.89) (A significantly lower likelihood for RTW of the RTW-E group). The corresponding HR for the per protocol population was not significant: 0.71 (0.42 to 1.19). **Median time-to-partial RTW (95 % CI)** RTW-E: 78 (60 to 95) days CAU: 70 (60 to 80) days (Difference between groups not significant) **Hazard ratio for partial-RTW** Hazard ratio RTW-E: CAU = 0.89 (0.62 to 1.29)

	Median of number of recurrences of sick leave (IQR) RTW-E: 0 (2) CAU: 1 (2) (Difference in means between groups not significant, P=0.96) **Mean distress at baseline and after 12 months (SD)** RTW-E: 19.0 (7.9) and 6.3 (6.0) CAU: 17.4 (7.9) and 7.3 (7.7) (Difference between groups not significant). **Mean depression at baseline and after 12 months (SD)** RTW-E: 2.7 (2.9) and 0.6 (1.5) CAU: 2.0 (2.8) and 0.9 (2.0) (Difference between groups not significant). **Mean anxiety at baseline and after 12 months (SD)** RTW-E: 5.5 (4.8) and 1.5 (2.4) CAU: 4.1 (5.0) and 1.6 (3.5) There was a significant overall difference between groups, P=0.004. However, no significant interaction between time and intervention group was observed, P=0.66, indicating that the absence of a time-dependent treatment effect. **Mean somatisation at baseline and after 12 months (SD)** RTW-E: 12.4 (6.3) and 5.2 (5.0) CAU: 11.5 (6.6) and 6.2 (5.9) (Difference between groups not significant). **Mean anxiety change scores from baseline to the 12 months follow-up** Significant difference between groups without adjustment: P=0.01. No significant difference between groups after adjustment (floor-effects and the effects of potential confounding of differences in the presence of mixed anxiety-depressive disorders and in age): P=0.27.
Risk of bias	Moderate for all outcomes. (Potential selection bias: occupational physician selected their own clientele to participate).
Comments	

Nystuen et al. 2006

Author	Nystuen et al.
Year	2006
Country	Norway
Reference	[66]
Study design	RCT
Setting and recruitment	Participant were recruited from six social security offices; of 703 considered eligible, 103 were included and randomised to intervention or control group.
Population	103 participants on sick leave more than 7 weeks due to non-severe psychological problems and muscle skeletal pain. Age, mean (SD): Intervention group 38.4 (10.1) Age, mean (SD): Control group 36.8 (10.3) Female (%): Intervention group 75.6 %; Control group = 76.3 %.
Follow-up	12 months
Intervention	Intervention group Participants in this group were offered solution focused follow-up, individually or in group, depending on preferences. Participants met for eight weekly sessions (3-4 hours) focusing on coping strategies, support between participants and solutions and goals for the future.
Participants (n)	n = 53
Drop-outs (n, %)	Excluded 15 %, analysed 85 %
Comparison	Control group Participants in control group received treatment as usual, including a variety of activities usually present to persons in this situation
Participants (n)	n = 50
Drop-outs (n, %)	Excluded 24 %, analysed 76 %
Statistical analysis /adjustments	ITT. Students t-test.
Outcomes	Mean length of sick leave after 12 months.
Missing data	8 persons in intervention group and 12 in control group.
Results	Mean absence days after 12 months: Intervention 87.0; control 90.7 p=0.85 (“statistical parametric test”).
Risk of bias	RTW: Moderate Secondary outcomes - health related quality of life (SF-36) not tabulated due to high risk of bias.
Comments	

Pedersen et al. 2015

Author	Pedersen et al.
Year	2015
Country	Denmark
Reference	[67]
Study design	RCT
Setting	Support intervention at Job centers
Recruitment	Between September 2012 and January 2014 individuals who had been on sick leave for 4-8 weeks and had a SCL-8 AD score ≥5 was contacted by phone. Sickness absence data were assessed from registers in job centers.
Population	Individuals at risk of having mental disorder Age (mean, SD): I = 43.5 (10.0) years; C = 43.9 (9.9) years Female (%): I = 49.8 %; C = 50.2 % Full-time sick leave (mean, %): I = 214 (99.5 %); C = 208 (96.7 %) Part-time sick leave (mean, %): I = 1 (0.5 %); C = 7 (3.3 %)
Follow-up	6 and 12 months
Intervention	Psychoeducation in group sessions consisting of six 2-h sessions once a week.
Participants (n)	215
Drop-outs (n, %)	15, 7 %
Comparison	Usual care offered by the job centers
Participants (n)	215
Drop-outs (n, %)	15, 7 %
Statistical analysis /adjustments	RTW in the intervention group compared to the control group was analysed as the RR of RTW.
Outcomes	RTW was operationalised as not receiving sickness benefits and was measured by register data from the municipalities' job centers.
Missing data	
Results	<u>Primary (full RTW)</u> **6 months:** The RR of full return to work was RR 0.97 (95 % CI:0.78;1.21) for the intervention group compared to the control group indicating the intervention did not affect the chance to return to work. **12 months**: Intervention group had a RR of 1.06 (95 % CI:0.92;1.22) for having fully returned to work compared to control group.
Risk of bias	RTW: Moderate Psychological symptoms: High (not tabulated) Mental health-related quality of life: High (not tabulated) Health locus of control: High (not tabulated)
Comments	

Rebergen et al. 2009 and Rebergen et al 2009

Author	Rebergen et al.
Year	2009
Country	The Netherlands
Reference	[68]
Author	Rebergen et al.
Year	2009
Country	The Netherlands
Reference	[69], cost-effectiveness analysis based on trial data. Details reported in Table of included health economic studies.
Study design	RCT
Setting	Two police departments who had contact with the same occupational health service (OHS)
Recruitment	Between January 2002 and January 2005, police workers on sick leave due to mental health problems (n = 240) were invited to the study by their OP.
Population	Police workers on sick leave due to common mental health problems Age (mean, SD): I = 38.8 (8.4) years; C = 40.0 (9.5) years Female (%): I = 48.8 %; C = 39.5 % Sick leave (full/partial): not stated.
Follow-up	12 months
Intervention	Guideline-based care (GBC) Occupational physicians (OPs) delivered the intervention after a 3-day training course in GBC; based on an activating approach, time contingent process evaluation, and cognitive behavioural principles; work-related interventions (gradual RTW, regular contact with supervisor, work accommodations) were proposed if the cause of the mental problems was work-related or resulted in work-disabilities.
Participants (n)	125
Drop-outs (n, %)	Not stated per group, in total, 16 (6.6 %) (15 left the police force, 1 committed suicide).
Comparison	Usual care Minimal involvement of the OP, and if applicable, easy access to psychologist in secondary care. (The same OPs treated patients from both groups)
Participants (n)	115
Drop-outs (n, %)	Not stated per group, in total, 16 (6.6 %) (15 left the police force, 1 committed suicide).
Statistical analysis /adjustments	ITT-analyses using Kaplan Meier curves and Cox proportional hazard regression, when needed, adjusted for prognostic dissimilarities between baseline measures; potential effect-modifiers were tested on interaction effects.
Outcomes	**Time to first RTW** and **Time to full RTW**: defined as the duration of sick leave due to mental health problems in calendar days from the moment of inclusion to the first (partial or full) and full RTW, respectively. (From records of the police department).

	Total productivity loss: defined as the duration of sick leave days until full RTW added with number of days of recurrences on sick leave in the 1-year follow-up. (From records of the police department)
Missing data	None (RTW data from drop-outs were censored in the analysis).
Results	RTW **Adjusted HR (95 % CI) for partial RTW, GBC compared to UC** 0.99 (0.75 to 1.31), p=0.94 **Adjusted HR (95 % CI) for full RTW, GBC compared to UC** 0.96 (0.73 to 1.27), p =0.78 **Adjusted HR (95 % CI) for total productivity loss, GBC compared to UC** 1.21 (0.86 to 1.71), p=0.28 Ancillary analyses on productivity loss indicated that police workers in administrative functions benefitted more from the GBC intervention than workers with executive functions, and that the severity of the disorder (depression/anxiety) interacted with the intervention; GBC seemed to be more effective for workers with "minor" stress-related symptoms than the UC.
Risk of bias	Moderate
Comments	

Reme et al. 2015 and Overland et al. 2018

Author	Reme et al.
Year	2015
Country	Norway
Reference	[70]
Author	Overland et al.
Year	2018
country	Norway
Reference	[71]
Study design	RCT, multi-center
Setting	NAV centers
Recruitment	People aged 18–60 years who were struggling with work participation attributable to common mental disorders were invited to participate between June 2010 – February 2012. This included people on and at risk of sick leave, as well as people on long-term benefits (primarily participants on work assessment allowance after >12 months sick leave). Of the 1193 participants, 336 (32 %) were referred from NAV, 238 (23 %) from their GP, 351 (22 %) were self-referred, 124 (12 %) got referred from other service providers, and 144 participants did not inform on the pathway to the trial. Assessment for eligibility included confirmation of CMD symptoms by a clinical psychologist, which were the primary cause of problems with work participation. Eligible participants had to express a motivation to RTW/stay at work.
Population	n = 1 193 Condition: CMD Age (years): Mean (95 % CI) T: 40.4 (39.9 to 41.0) Women: N (%) T: 799 (67) Symptom duration (years): mean (SD) T: 8.6 (9.76) Employed: 31.4 % (48 % on partial sick leave) Full-time sick leave: 39 % On sick leave >12 months: 27.7 % Unemployed: 7.9 %
Follow-up	12- to 18-month follow-ups, up to 46 months.
Intervention	AWaC (At Work and Coping): work-focused CBT + IPS Miniteams of therapists and employment specialists were formed at each (NAV) centre to ensure integration between CBT and the explicit work focus. CBT was characterised by 'cognitive work-coping' and focused on managing mental health problems as they relate to work situations. Up to 15 sessions of CBT were offered. The individual job support was based on the IPS approach, developed for people with severe mental illness, and was offered to those in need of individual job support (primarily participants on long-term disability) to facilitate workplace adaptations or identification of appropriate employment.

	All participants received CBT delivered by a clinical psychologist/counsellor, and 32 % also received individual job support. Many also received other interventions from NAV and health services.
Participants (n)	n = 630
Drop-outs (n, %)	5 % (completed <3 sessions)
Comparison	TAU, Patients allocated to the control group received standard treatment from their GP, national insurance office (NAV), other health professionals, and received a letter with information and encouragement to use available services and self-help resources.
Participants (n)	n = 563
Drop-outs (n, %)	Treatment adherence in the control group was not registered.
Outcomes	**Reme et al. 2015 [70]** **Work participation (primary)** Data taken from the national social insurance register and the national employee register. Increased or maintained work participation = maintained work participation, new employment or a full or partial RTW, depending on the individual's baseline work status. Full or partial RTW = working and no reception of health-related or work-related benefits, or reduced benefit coverage and increased work participation compared with baseline status. Subgroup long-term sick-leave = people who were unemployed or had received sick-leave benefits for more than 12 months at baseline (n = 267).
Statistical analysis /adjustments	ITT, unadjusted descriptive statistics, and logistic and multinomial logistic regression analyses when adjusting for minor by-chance remaining differences in observed characteristics between the intervention group and the control group. Adjusted for gender, age, marital status, income prior to inclusion, self-assessed health, expectation of return to work, work status at inclusion and treatment site. Subgroup effects (a priori) assessed with regression model for the following prespecified factors: gender, age, work status at baseline, inclusion early vs late in the project period, duration, and intensity of mental health symptoms.
Missing data	No loss to follow-up
Results	**Reme et al. 2015 [70]** **Increased or maintained work participation** (unadjusted descriptive) • **12-month:** AWaC: 44.2 % TAU: 37.2 %, difference 6.9 %, p = 0.015 • **18-month:** difference 7.8 %, p = 0.018 Subgroup: long-term sick-leave (n = 267) • **12-month:** AWaC: 24 % TAU: 12 % • **18-month:** AWaC: 30 % TAU: 11 % There was no statistically significant effect difference between AWaC and controls in the other subgroups (on sick leave and at risk of going on sick leave). **Increased or maintained work participation** (adjusted): Marginal effect (95 % CI)

	• **12-month:** 0.062 (0.005 to 0.118) • **18-month:** 0.070 (−0.024 to 0.165) Subgroup: long-term sick-leave (n = 267) • **12-month:** 0.074 (0.011 to 0.137) • **18-month:** 0.178 (0.104 to 0.253) **Full RTW** (adjusted): Marginal effect (95 % CI) • **12-month:** 0.034 (−0.026 to 0.095) • **18-month:** 0.038 (−0.041 to 0.118) Subgroup: long-term sick-leave (n = 267) • **12-month:** 0.002 (−0.042 to 0.047) • **18-month:** 0.091 (0.033 to 0.149) **Partial RTW** (adjusted): Marginal effect (95 % CI) • **12-month:** 0.025 (−0.014 to 0.064) • **18-month:** 0.029 (−0.007 to 0.065) Subgroup: long-term sick-leave (n = 267) • **12-month:** 0.058 (0.002 to 0.115) • **18-month:** 0.066 (0.004 to 0.127)
Outcomes **Statistical analysis /adjustments** **Missing data** **Results**	**Overland, 2018 [71]** Work participation (primary) Data sources: See above Full RTW = participants who worked and received no benefits, per month and participant (work no benefits). Rate of full RTW over time = participants who were classified as full RTW ≥ 24 out of 36 months. Annual income = annual earnings in the second and third year after inclusion Subgroup long-term sick-leave = people who were unemployed or had received sick-leave benefits for more than 12 months at baseline (n = 267) ITT, unadjusted descriptive statistics, and logit regression adjusted for study centre and by-chance differences between the intervention and the control group. Covariates with considerable prediction of the outcomes were included as controls to reduce residual variance in the models. Adjusted-C = adjusted for cluster effect by site. Adjusted-F = adjusted for cluster effect by site and gender, age, education, positive work expectations and self-assessed health. No loss to follow-up. **Full RTW, unadjusted**: mean number of months (median) • **46-month:** AWaC: 20.3 (21) TAU: 18.5 (15) Subgroup: long-term sick-leave (n = 267) • **46-month:** AWaC: 8.8 (0) TAU: 6.0 (0)

	Number who achieved full RTW in sample: N = 450 (37.9 %) **Rate of full RTW over 46 months:** difference in rate, AWaC - TAU (SE) Unadjusted: 0.048 (0.036) Adjusted-C: 0.047 (0.036) Adjusted-F: 0.035 (0.039) Subgroup: long-term sick-leave (n = 267) **Number who achieved full RTW in subgroup:** N = 28 (10.5 %) **Rate of full RTW over 46 months:** difference in rate, AWaC - TAU (SE) Unadjusted: 0.092** (0.044) Adjusted-C: 0.092** (0.037) Adjusted-F: 0.071** (0.031) *P<0.1, **p<0.05, ***p<0.001. **Also reported:** Annual income, net difference
Outcomes	**Mental health, HR-QOL (secondary):** The secondary outcome measures were questionnaire-based changes in psychological distress, and symptoms of anxiety and depression by use of the HAD Scale. EQ5D was used to measure changes in HR-QOL.
Statistical analysis /adjustments	ITT, descriptive statistics, and analyses with inverse probability weights to account for possible attrition bias. The weights included demographics (age, gender, and education) and the outcomes of interest (psychological distress, anxiety, and depression symptoms).
Missing data	Data available for 636 (52 %) participants at 12-month follow-up.
Results	**Depression (HAD-D) at 12-month follow-up:** N, mean (SE, 95 % CI) • AWaC: N = 376, 5.11 (0.23, 4.67 to 5.56) • TAU: N = 251, 6.27 (0.28, 5.72 to 6.81) **Anxiety (HAD-A) at 12-month follow-up:** N, mean (SE, 95 % CI) • AWaC: N = 376, 7.88 (0.24, 7.40 to 8.36) • TAU: N = 251, 8.86 0.30 8.26 to 9.46 **Overall mental health (HAD total) at 12-month follow-up:** N, mean (SE, 95 % CI) • AWaC: N = 376, 13.00 (0.43, 12.14 to 13.84) • TAU: N = 251, 15.12 (0.53, 14.08 to 16.16) **HR-QOL (EQ5D) at 12-month follow-up:** N, mean (SE, 95 % CI) • AWaC: N = 376, 65.64 (1.15, 63.38 to 67.90) • TAU: N = 251, 61.57 (1.41, 58.78 to 64.36) Subgroup: long-term sick-leave: We observed no increased effect for the subgroup on long-term benefits regarding symptoms of mental health or health-related quality of life.

	Also reported: 6-month follow-up
Risk of bias	Work participation: Moderate Mental health: High HR-QOL: High
Comments	ClinicalTrials.gov Identifier: NCT01146730 We calculated the economic returns of AWaC compared with usual treatment by a standard cost-benefit formula based on the human capital approach – both articles.

Reme et al. 2016

Author	Reme et al.
Year	2016
Country	Norway
Reference	[39]
Study design	RCT: CINS trial "This was a four-arm, multicentre, randomised, double-blind, placebo-controlled trial"
Setting	4 outpatient clinics
Recruitment	Recruitment through NAV February 2008 to August 2010
Population	n = 414 Condition: LBP, chronic ICPC diagnoses: L02 (back symptom/complaint), L03 (low back symptom/complaint), L84 (back syndrome without radiating pain), or L86 (back syndrome with radiating pain). Age (years): Mean (95 % CI) T: 44.8 Women: n (%) BI: 56 (56.0) BI + CBT: 56 (54.4) BI + seal oil: 55 (52.4) BI + soy oil: 50 (47.6) Symptom duration (years): mean (SD) T: 12.5 Sick leave: minimum 50 % sick-leave for 2-10 month
Follow-up	1 to 12-months
Interventions **Participants (n)** **Drop-outs (n, %)**	**BI alone:** 2-session brief cognitive, clinical examination program based on a noninjury model addressing pain and fear avoidance, where return to normal activity and work is the main goal. BI also includes a follow-up session with a physiotherapist, involving an educational and a behavioural part. Patients were additionally offered two short booster sessions. Note that this group is also reported in [38]. n = 100 allocated, 100 received allocated intervention **BI + CBT:** BI + tailored, individual, 7-session, manual-based treatment, delivered over 2 to 3 months sufficient adherence = attending at least 4 of 7 sessions, or completion due to full RTW N = 103 allocated, 103 received allocated intervention **BI + Nutritional supplements (seal or soy oil):** BI + commercially available seal or soy oil for the same duration as the CBT treatment. Oils were administered as 20 capsules daily. Sufficient adherence = oral or written confirmation of compliance with only occasional omissions **BI + seal oil:** N = 105 allocated, 105 received allocated intervention **BI + soy oil:** N = 106 allocated, 105 received allocated intervention

Outcomes	**Sick leave (primary)** Data taken from the national social insurance registry (NAV) Operationalised as: Transition from full-time sick-leave to part- or full-time RTW Transition from part-time sick-leave to a lower gradient of sick-leave or full RTW
Statistical analysis /adjustments	ITT, unadjusted descriptive statistics.
Missing data	No loss to follow-up
Results	**Increased RTW: N (%)** **0 to 12-month:** BI: 60 (60) BI + CBT: 51 (50) BI + Seal oil: 54 (51) BI + Soy oil: 56 (53) Chi^2 = 2.54 df = 3 p = 0.47 **Full RTW** **12-month:** BI: 56 % BI + CBT: 47 % BI + Seal oil: 51 % BI + Soy oil: 48 % **Transitions from sick leave to work** Analysis of transition states not performed due to lack of significant treatment effects. **Also reported:** Increased RTW from 0 to 11 months post intervention
Outcomes	**Health related outcomes (secondary)** The secondary outcomes were self-reported using validated scales: Psychological distress and symptoms of anxiety and depression (HADS) Pain related function (ODI) Subjective health complaints (SHC) HR-QOL (EQ5D) Back pain over last 14 days (0 to 10 scale)
Statistical analysis /adjustments	ITT & per protocol, descriptive statistics, and analyses with inverse probability weights to account for possible attrition bias. The weights included demographics (age, gender, and education) and the outcomes of interest (psychological distress, anxiety, and depression symptoms).
Missing data	12-month follow-up: n (%) BI: 52 (52) BI + CBT: 31 (30.4) BI + Seal oil: 35 (33.3) BI + Soy oil: 35 (33.3)
Results	**Back pain (last 14 d) 12-month follow-up:** mean (SE, 95 % CI) BI: 5.59 (4.98–6.21) BI + CBT: 4.42 (3.71–5.14) BI + Seal oil: 5.67 (5.10–6.25) BI + Soy oil: 5.06 (4.39–5.73) F = 2.92 p = 0.03 **Pain during activity (last week) 12-month follow-up:** N, mean (SE, 95 % CI) BI: 5.28 (4.68–5.88) BI + CBT: 3.96 (3.22–4.70) BI + Seal oil: 5.12 (4.50–5.73) BI + Soy oil: 4.35 (3.73–4.96) F = 3.44 p = 0.02 **Pain during rest (last week) at 12-month follow-up:** N, mean (SE, 95 % CI)

	BI: 3.82 (3.17–4.48) BI + CBT: 3.36 (2.66–4.05) BI + Seal oil: 3.3 (2.78–3.83) BI + Soy oil: 2.93 (2.36–3.49) F = 1.38 p = 0.25 **Pain-related function (ODI) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 22.3 (18.7–25.9) BI + CBT: 19.2 (15.2–23.2) BI + Seal oil: 21.7 (18.3–25.2) BI + Soy oil: 20.5 (16.7–24.4) F = 0.51 p = 0.68 **Anxiety symptoms (HADS) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 4.3 (3.17–5.44) BI + CBT: 3.32 (2.53–4.11) BI + Seal oil: 4.47 (3.46–5.48) BI + Soy oil: 4 (3.04–4.95) F = 1.27 p = 0.28 **Depressive symptoms (HADS) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 3.17 (2.19–4.15) BI + CBT: 2.71 (2.04–3.37) BI + Seal oil: 3.47 (2.50–4.44) BI + Soy oil: 3.34 (2.45–4.23) F = 0.74 p = 0.53 **Musculoskeletal complaints (SHC) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 6.6 (5.58–7.61) BI + CBT: 6.34 (5.20–7.48) BI + Seal oil: 6.98 (5.85–8.11) BI + Soy oil: 7.29 (5.99–8.59) F = 0.47 p = 0.71 **Pseudoneurological complaints (SHC) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 3.8 (3.01–4.58) BI + CBT: 3.28 (2.58–3.98) BI + Seal oil: 3.76 (2.90–4.62) BI + Soy oil: 3.95 (2.93–4.97) F = 0.53 p = 0.66 **Gastrointestinal complaints (SHC) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 2.42 (1.64–3.20) BI + CBT: 1.68 (1.20–2.17) BI + Seal oil: 2.1 (1.48–2.71) BI + Soy oil: 2.23 (1.61–2.84) F = 1.13 p = 0.34 **HR-QOL (EQ5D) at 12-month follow-up:** N, mean (SE, 95 % CI) BI: 63 (58.3–67.7) BI + CBT: 66.1 (61.5–70.7) BI + Seal oil: 66 (61.8–70.1) BI + Soy oil: 65.2 (61.2–69.2) F = 0.37 p = 0.77 **Also reported:** estimated marginal mean values for secondary outcomes at baseline (ITT and per protocol), 3- and 6- months post intervention
Risk of bias	RTW: Moderate Health related outcomes: Moderate
Comments	Note that there were 4 arms in the main CINS study (reported in [39]). “The participating centres (clinics) were given the opportunity to add one or two additional treatment arms to the study. Consequently, for the clinic where the data for this study was drawn, patients were randomised to six treatments, the 4 in CINS + 2 unique for this study (BI + group CBT; and BI + group PE).

Rossignol et al. 2000

Author	Rossignol et al.
Year	2000
Country	Canada
Reference	[72]
Study design	RCT
Setting	Primary care
Recruitment	Recruitment was done from the Montreal Regional Office of the Quebec Workers Compensation board computer system between June 1995 and December 1996.
Population	Patients with subacute low-back pain Age (mean, SD): I = 36.8 (9.7) years; C = 38.3 (10.5) years Male (%): I = 66.7 %; C = 76.8 %
Follow-up	6 months
Intervention	Program for coordination of primary health care (CORE). A CORE team consisting of physicians and a nurse assisted the treating physician in finding and scheduling diagnostic and therapeutic procedures. The nurse also contacted each worker weekly by telephone.
Participants (n)	54
Drop-outs (n, %)	0 (likely)
Comparison	Usual care with their physician
Participants (n)	56
Drop-outs (n, %)	0
Statistical analysis /adjustments	Kaplan-Meier curves and multivariate Cox proportional hazard analysis were performed to compare the two groups for return to work.
Outcomes	RTW defined as duration of absence from work was taken from registers.
Missing data	No missing data for RTW outcome.
Results	<u>Primary (RTW)</u> Hazard ratio of RTW was 1.3 (95 % confidence interval (95 % CI) 0.8–1.7) including age, gender, occupation, and history of compensation for back pain. The difference was not statistically significant. At 6 months 77.8 % of the CORE group had returned to work and 73.2 % in the control group (X^2: p=0.1).
Risk of bias	RTW: Moderate Pain: High (not tabulated) Functional disability: High (not tabulated)
Comments	

Salomonsson et al. 2017 and 2020

Author	Salomonsson et al.
Year	2017
Country	Sweden
Reference	[73]
Author	Salomonsson et al.
Year	2020
Country	Sweden
Reference	[74]
Study design	RCT
Setting **Recruitment**	Participants were recruited from primary healthcare centres by their general practitioner, who referred all patients with mild to moderate mental disorders who were interested in receiving psychological treatment. Participants were randomised to one of three groups: cognitive behavioural therapy (CBT), return to work intervention (RTW-I) or both (COMBO).
Population	Workers on sick leave for at least one month, maximum 6 months, due to mental disorder (depression, social phobia, generalised anxiety disorder, PTSD, panic disorder, OCF specific phobia, adjustment disorder, insomnia, or exhaustion disorder). Age (mean, SD), female: CBT: 42.5 (9.2) years; female 84 % RTW-I: 42.2 (9.5) years; female 79 % COMBO: 41.5 (10.4) years, female 84 %
Follow-up	12 months
Intervention 1	Cognitive behavioural therapy Treatments were based on available evidence-based CBT protocols for each specific disorder. Depending on psychiatric disorder, the length of CBT varied between 8 and 20 weekly sessions.
Participants (n)	n = 64
Drop-outs (n, %)	n = 4, 6.7 %
Intervention 2	RTW-I The treatment consisted of four central modules: (1) conceptualisation, (2) psychoeducation, (3) planning and (4) monitoring. These modules were worked through in 10 sessions over a period of 20 weeks, initially weekly then follow-ups more sparsely.
Participants (n)	n = 67
Drop-outs (n, %)	n = 4, 6.0 %

Intervention 3	Combination treatment (COMBO): In COMBO, the treatments were combined, starting with three RTW-I sessions (the first three modules), followed by CBT for the specific disorder. Depending on the specific disorder and CBT protocol, the COMBO treatment thus varied between 10 and 25 sessions during a period of maximum 25 weeks.
Participants (n)	n = 80
Drop-outs (n, %)	n = 4, 5.0 %
Statistical analysis /adjustments	ITT. Mixed models with interaction effect of group and time. Adjusted for sick leave days 1 year before randomisation.
Outcomes	Sick leave days during follow-up, full day equivalents. Self-assessed outcomes in questionnaire follow-up: Psychiatric symptoms (Clinician severity rating, CSR); Hospital Anxiety and Depression Scale (HADS); Montgomery Åsberg depression rating scale – self assessed (MADRS-S), Quality of life Inventory (QOLI), Work Ability Index (WAI).
Missing data	None for sick leave outcome. 76.6 %, 80.5 % and 86.2 % for CBT, RTW-I and COMBO questionnaire data, respectively.
Results	**Sick leave, days 0-12 months after randomisation, m (sd):** CBT = 146.5 (124.3); RTW-1 = 123.5 (104.5); COMBO = 133.0 (109.2), ns for the three group comparisons. **Sick leave, proportions of full-time sick-leave, part-time sick-leave or without sick-leave at 12 months:** X2 = 1.48; df = 4; p = 0.831 There was no significant difference between treatments regarding symptoms (CSR) **anxiety**, **depression, stress, quality of life or self-rated work ability** at 12 months follow-up. A post hoc analysis on effect of treatments in "stress subgroup" (n=152) and other primary common mental disorders was performed and presented in a separate paper (Salomonsson et al. 2020, [74]) There was no difference between treatments regarding sick leave the year after randomisation for the stress subgroup. For self-assessed outcomes, effect size (Cohens D) (95 % CI) between group at 12 months: **Anxiety**, Hospital and Anxiety Rating Scale (HADS; Zigmond & Snaith, 1983). CBT vs RTW, ES: 0.10 (-0.34 – 0.53) RTW-I vs COMBO ES: 0.04 (-0.39 – 0.48) COMBO vs CBT; ES -0.05 (-0.38 – 0.48)

	Depression, Montgomery Åsberg Depression Rating Scale-Self Rated (MADRS-S) CBT vs RTW, ES: 0.23 (-0.21 – 0.66) RTW-I vs COMBO, ES -0.20 (-0.63 – 0.23) COMBO = vs CBT -0.01 (-0.41 – 0.44) **Exhaustion**, Shirom-Melamed Burnout Questionnaire (SMBQ-22; Melamed, Kushnir & Shirom). CBT vs RTW-I, ES: 0.35 (-0.13 – 0.82) RTW-I vs COMBO, ES: 0.03 (-0.49 – 0.43) COMBO vs CBT, ES: -0.31 (-0.78 – 0.17)
Risk of bias	RTW: Moderate for all outcomes.
Comments	

Scheel et al. 2002

Author	Scheel et al.
Year	2002
Country	Norway
Reference	[75]
Study design	Cluster RCT
Setting	Interventions were targeted at physicians, patients, employers, and local National Insurance Administration (NIA) staff.
Recruitment	Three of Norway's counties were selected. All 65 municipalities in these counties were included in the study. All patients residing in any of the 65 participating municipalities who met the inclusion criteria between September 1998 and November 1999 were included in the analyses. Patients were identified in the Norwegian NIA register.
Population	Patients on sick leave for low back pain (LBP) for more than 16 days. Exclusion criteria: pregnancy; self-employment; part-time sick leave. Age (mean, SD): Passive intervention = 39.2 (11.5) years; Proactive intervention= 40.7 (11.8) years; Control = 40.2 (11.5) years. Female (%): Passive intervention = 54 %; Proactive intervention = 48 %; Control = 48 %
Follow-up	12 months. Questionnaires to determine quality of life were administered at 3 and 12 months.
Intervention	The study included two intervention groups: Passive intervention to increase the use of active sick leave (ASL), which is a Norwegian social insurance option which enables employees to return to modified duties at the workplace. The passive intervention included reminders about ASL on the sick leave form that GPs must complete, a standard agreement to facilitate ASL, targeted information, and a desktop summary for GPs of clinical practice guidelines for LBP emphasising the importance of advice to stay active. Proactive intervention to increase the use of ASL. The proactive intervention also included a continuing education workshop for GPs and a trained resource person to facilitate the use of ASL.
Participants (n)	Passive intervention: 21 municipalities; n = 2 045 patients; Proactive intervention: 21 municipalities; n = 2 232 patients
Drop-outs (n, %)	None
Comparison	Control group. No further details on what this comprised.
Participants (n)	22 municipalities; n = 1 902 patients
Drop-outs (n, %)	None
Statistical analysis /adjustments	Methods specific to cluster-randomised data including cluster-adjusted chi-2 and t-tests. A hierarchical regression model was estimated for each main outcome to account for patient and municipality-level covariates.
Outcomes	

Missing data Results	Main outcomes: Number of days off work, proportion of patients returning to work within 1 year, and self-reported quality of life. Secondary outcomes: Number of recurrent episodes of sick leave for LBP; Patient satisfaction. No missing data for work-related outcomes as these were collected from administrative data. Missing data for quality of life (collected through questionnaire): 61.5 % **Days off work** There were no significant differences in the average number of days on sick leave between groups. Mean (SE) for passive intervention, all episodes of sick leave combined: 124.8 (2.7); Mean (SE) for proactive intervention, all episodes combined: 127.7 (2.6); Mean (SE) for control, all episodes combined: 128.5 (2.8). **Long-term disability** The proportion (95 % CI) of patients having returned to work within 50 weeks was similar between groups. Passive intervention: 90 % (88.5 %-91.4 %); Proactive intervention: 89.0 % (87 %-90.9 %); Control: 89.1 % (87.7 %-90.5 %). **Sick-leave for back-pain (secondary outcome)** The proportion of patients with multiple episodes of leave for back pain was similar across groups. Passive intervention: 11.6 % (10.2 %-13.0 %); Proactive intervention: 11.8 % (10.3 %-13.3 %); Control: 11.2 (9.4 %-12.9 %).
Risk of bias	Moderate for RTW-outcomes, high for quality of life.
Comments	Results for quality of life and patient satisfaction not tabulated due to high proportion of missing data (61.5 %).

Schweikert et al. 2006

Author	Schweikert et al.
Year	2006
Country	Germany
Reference	[76]
Study design	RCT
Setting	Rehabilitation center
Recruitment	Eligibility for rehabilitation treatment was assessed by staff of the pension insurance administration. Final recruitment was performed at admission to the rehabilitation clinic.
Population	Patients with a history of nonspecific low-back pain of at least 6 months Age (mean, SD): 46.7 (9.1) years Male (%): 339 (82.9 %) Sick leave (%): No= 103 (25.2 %); <6 months= 283 (69.2 %); >6 months= 23 (5.6 %)
Follow-up	6 months
Intervention	Cognitive behavioural therapy in combination with standard 3-week inpatient rehabilitation. The CBT comprised 6 group sessions of 1.5 hour each plus one individual preparatory session (0.5 hour) and a final individual session (0.5 hour).
Participants (n)	200
Drop-outs (n, %)	66 (33 %)
Comparison	Standard 3-week inpatient rehabilitation. It consisted daily physiotherapy in small groups, massage of spinal region, electrotherapeutical measures, 1-hour seminar regarding back training, twice-daily exercise program, seminars on lifestyle, and risk factors for back pain and its process of becoming chronic.
Participants (n)	209
Drop-outs (n, %)	57 (27 %)
Statistical analysis /adjustments	No information
Outcomes	Data on sick leave were derived from sickness insurance funds and defined as number of days off work in the follow-up period of 6 months following the discharge from rehabilitation.
Missing data	No information
Results	**RTW** Days of work: Intervention= 11.4 (28.9) days Control= 16.8 (34.1) days. Difference 5.4 days, p=0.115
Risk of bias	Sick leave presented as days of work: Moderate HRQoL: High (not tabulated) Functional capacity: High (not tabulated)

	Depression: High (not tabulated) Anxiety: High (not tabulated) Subject back pain: High (not tabulated)
Comments	The study also included a health economic analysis of cost-effectiveness. This was assessed to be of low transferability to the Swedish setting and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Skagseth et al. 2020

Author	Skagseth et al.
Year	2020
Country	Norway
Reference	[77]
Study design	RCT
Setting	Multimodal with workplace meetings vs shorter multimodal rehabilitation including acceptance and commitment therapy.
Recruitment	Potential participants were recruited in one of two ways: identified in registers from the Norwegian Labour and Welfare Administration (NAV) and invited through a letter or referred from their general practitioner. 111 recruited from NAV registers and 64 from general practitioners.
Population	175 workers on sick leave (at least 50 % or more) for 2-12 months with a diagnosis within the musculoskeletal, psychological, or general and unspecified chapters of International Classification Primary Care, version 2, ICPC-2. Randomised to I-MORE+WI (n=88) or I-MORE (n=87) Age (mean, SD), female: I-MORE-WI: 45 (9) years; female 77 % I-MORE-I: 46 (8) years; female 80 %
Follow-up	12 months
Intervention	I-MORE The program lasted four weeks: two weeks at the rehabilitation center, one week at home, and one week at the center. The program consisted mainly of acceptance and commitment therapy, physical exercise training, and group- and individual sessions of work-related problem-solving resulting in a RTW plan.
Participants (n)	n=87
Drop-outs (n, %)	n=6, 6.9 %
Intervention	I-MORE + WI The program consisted of same interventions as I-MORE arm, but also a workplace intervention, which consisted of 1) preparations before the workplace meeting, 2) the workplace meeting, and 3) writing a summary of the meeting.
Participants (n)	n=88
Drop-outs (n, %)	n=20, 22.7 %
Statistical analysis /adjustments	ITT. Mann-Whitney U (Wilcoxon rank sum) test for sick leave days and log rank text + Cox proportional hazard models for time to return to work, unadjusted and adjusted for age, gender, education, main diagnoses, and length of sick leave at inclusion.

Outcomes	Cumulative number of sickness absence days (recalculated to whole days) Time until sustainable return two work, defined as 4 weeks without receiving medical benefits.
Missing data	No missing data.
Results	Sickness absence, days 0-12 months after randomisation, m (IQR): I-MORE +WI: 130 (81-212) I-MORE: 115 (53-183), p-.value for comparison (Mann- Whitney U test): 0.084 Sustainable return to work, proportion of participants: I-MORE +WI: 42 % I-MORE: 52 %, p-value for difference (log rank test), 0.74. HR for comparison (adjusted values): HR 0.77 (95 % CI 0.49-1.23) in favour of I-MORE.
Risk of bias	RTW: Moderate for all outcomes.
Comments	Unclear which intervention the authors considered as control.

Skouen et al. 2002

Author	Skouen et al.
Year	2002
Country	Norway
Reference	[78]
Study design	RCT
Setting	Intervention delivered by an interdisciplinary team at an outpatient spine clinic.
Recruitment	This study considers treatment effects for patients with LBP who were part of a larger controlled randomised clinical trial. The larger trial included long-term sick-listed employees with musculoskeletal pain. In the larger trial, all persons living in the municipality of Bergen or one of the surrounding municipalities who met the inclusion criteria during the enrolment period from January 1996 to March 1997 received an invitation letter from the local National Health Insurance to participate in the trial.
Population	Patients with chronic low back pain on sick leave more than 50 % for at least 8 weeks, or not currently on sick leave but sick-listed for at least 2 months per year for the last two years. Age (mean, SD): Light multidisciplinary treatment program = 43.7 (11.5) years; Extensive multidisciplinary program = 42.9 (10.5) years; TAU = 44.0 (11.7) years Female (%): Light multidisciplinary treatment program = 60 %; Extensive multidisciplinary program = 70 %; TAU = 64 %
Follow-up	26 months after the end of treatment. The zero-point was 2 months after enrolment, which was the end of the defined treatment period.
Intervention	Light multidisciplinary treatment program involving team of a neurologist, a general practitioner, a psychologist, two nurses, and four physiotherapists. Extensive multidisciplinary program, involving same team as above. The program lasted for 4 weeks, with 6-hour sessions 5 days per week and included cognitive behavioural modification in group sessions, education, exercises, and occasional workplace interventions.
Participants (n)	N randomised: Light multidisciplinary treatment program: n= 56; Extensive multidisciplinary program: n= 57
Drop-outs (n, %)	Drop-out after randomisation: n=3, all in the light multidisciplinary treatment group
Comparison	Treatment as usual (TAU) by general practitioner
Participants (n)	86
Drop-outs (n, %)	None
Statistical analysis /adjustments	Proportions achieving full RTW were presented by a noncumulative curve, with P values reported at 12, 18, and 24 months after treatment. Mean values of number of months at work from after the end of treatment to 12, 18, and 24 months of follow-up by gender were compared using ANOVA. Least significant difference (LSD) post hoc test was used for pairwise comparison. Relative risk (RR) and 95 % CI for the effect of light multidisciplinary treatment versus TAU on return to work were plotted in figures for males and females, respectively.
Outcomes	Primary outcome: Full return to work, calculated in percentage every month

	Additionally, cost-benefit was calculated for the treatment programs
Missing data	RTW records were not available for government-employed workers, wich led to missing data as follows: Light multidisciplinary treatment program: n = 4; Extensive multidisciplinary program: n = 0; TAU: n = 9.
Results	In men, significantly better results for full return to work were found for the light multidisciplinary treatment compared with TAU, but no differences were found between extensive multidisciplinary treatment and TAU. In women, no significant differences between any of the two multidisciplinary treatment programs and TAU were found. Mean (SD) values of number of months at work, 24-month follow-up, males: TAU: 11.1 (9.6); n= 31 Light multidisciplinary treatment: 16.9 (7.5; n=21; P=0.02 for difference vs TAU Extensive multidisciplinary treatment: 14.1 (8.8); n=17; P=0.26 for difference vs TAU; P=0.34 for difference vs light multidisciplinary treatment. Mean values of number of months at work, 24-month follow-up, females: TAU: 11.9 (8.8); n= 55 Light multidisciplinary treatment: 13.1 (8.5); n=31; P=0.54 for difference vs TAU Extensive multidisciplinary treatment: 12.4 (8.7); n=40; P=0.77 for difference vs TAU; P=0.75 for difference vs light multidisciplinary treatment.
Risk of bias	Moderate
Comments	Subgroup analysis of clinical trial reported in study [36]. The study also included a health economic analysis of cost-benefit. This was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Skouen et al. 2006

Author	Skouen et al.
Year	2006
Country	Norway
Reference	[79]
Study design	RCT
Setting	Intervention delivered by an interdisciplinary team at an outpatient spine clinic.
Recruitment	This study considers treatment effects for patients with chronic widespread pain who were part of a larger controlled randomised clinical trial. The larger trial included long-term sick-listed employees with musculoskeletal pain. In the larger trial, all persons living in the municipality of Bergen or one of the surrounding municipalities who met the inclusion criteria during the enrolment period from January 1996 to March 1997 received an invitation letter from the local National Health Insurance to participate in the trial.
Population	Patients with chronic widespread pain on sick leave more than 50 % for at least 8 weeks, or not currently on sick leave but sick-listed for at least 2 months per year for the last two years. Age (mean, SD): Light multidisciplinary treatment program = 43.2 (10.9) years; Extensive multidisciplinary program = 42.6 (11.0) years; TAU = 43.1 (10.7) years Female (%): Light multidisciplinary treatment program = 69 %; Extensive multidisciplinary program = 71 %; TAU = 69 %
Follow-up	54 months after the end of treatment. The zero-point was 2 months after enrolment, which was the end of the defined treatment period.
Intervention	1. Light multidisciplinary treatment program involving team of a neurologist, a general practitioner, a psychologist, two nurses, and four physiotherapists. 2. Extensive multidisciplinary program, involving same team as above. The program lasted for 4 weeks, with 6-hour sessions 5 days per week and included cognitive behavioural modification in group sessions, education, exercises, and occasional workplace interventions.
Participants (n)	N randomised: Light multidisciplinary treatment program: n= 83; Extensive multidisciplinary program: n= 44
Drop-outs (n, %)	Drop-out after randomisation: n=3 in the light group; n=1 in extensive group
Comparison	Treatment as usual (TAU) by general practitioner
Participants (n)	88
Drop-outs (n, %)	None
Statistical analysis /adjustments	Linear regression analysis on the total number of days absent from work was performed to determine the mean effect of treatment, controlling for age and pre-treatment prognosis. Men and women were analysed separately.
Outcomes	Total number of days absent from work
Missing data	

Results	RTW records were not available for government-employed workers, which led to missing data as follows: Light multidisciplinary treatment program: n = 2; Extensive multidisciplinary program: n = 2; TAU: n = 3. The extensive program was associated with significantly fewer days absent from work among women. Among men, there was no benefit from either multidisciplinary program compared with TAU, and the light program was even associated with significantly more total days absent from work. Coefficients from regression analysis, females (n=145): Light multidisciplinary treatment: - 72.54; SE 71.41; p= 0.31 Extensive multidisciplinary treatment: - 206.95; SE 86.29; p= 0.02 Coefficients from regression analysis, males (n=63): Light multidisciplinary treatment: 182.47; SE 90.60; p= 0.05 Extensive multidisciplinary treatment: 142.71; SE 112.06; p= 0.21
Risk of bias	Moderate
Comments	Subgroup analysis of clinical trial reported in study [36]. The study also included a health economic analysis of cost-benefit. This was assessed to be of low methodological quality and was therefore not tabulated. The assessment was conducted using SBU's checklist for trial-based health economic studies.

Steenstra et al. 2006

Author	Steenstra et al.
Year	2006
Country	The Netherlands
Reference	[7] (based on the same study as Anema et al. 2007 [3])
Study design	RCT with economic evaluation
Setting	Occupational health care
Recruitment	Patients were recruited by 55 occupational physicians from October 2000 to October 2002. There were two randomisation procedures in this trial. 1) workplace intervention (WI) or usual care (UC); 2) for workers who were still off work after 8 weeks: clinical intervention (CI) or usual care (UC).
Population	Workers sick-listed for a period of 2 to 6 weeks due to low-back pain LBP Age (mean, SD): WI + CI = 43.6 (7.9); WI + UC = 43.5 (6.7); UC + CI = 39.2 (9.9); Only UC 43.3 (9.5) Female (%): 52 %; WI + UC: 44 %; UC + CI = 79 %; Only UC = 60 %
Follow-up	3, 6, and 12 months after the first day of sick leave
Intervention	Workplace intervention delivered between 2-8 weeks of sick leave, followed by clinical intervention (WI + CI). Workplace intervention delivered between 2-8 weeks of sick leave, followed by usual care (WI + UC). Usual care, followed by clinical intervention after 8 weeks of sick leave (UC + CI). The **workplace intervention** consisting of a workplace assessment, work modifications and case management in which all major stakeholders in the return-to-work process participate (i.e., the worker, the employer, the occupational physician (OP) and the worker's general practitioner (GP)). The **clinical intervention** comprised of a graded activity program, i.e., a gradually increasing exercise program based on an operant behavioural approach. The entire program consisted of 26 one-hour sessions maximally, with a frequency of two sessions a week. The program ended as soon as a full RTW had been established.
Participants (n)	Randomisation 1: Workplace intervention during first 8 weeks: n= 96 Usual care during first 8 weeks: n = 100 Randomisation 2, workers who were still off work after 8 weeks: Workplace intervention followed by clinical intervention: n= 27 Workplace intervention followed by usual care: n= 25 Usual care followed by clinical intervention: n = 28
Drop-outs (n, %)	Workplace intervention: Ten workers out of 96 did not fully comply to the workplace intervention protocol: 5 workers returned to work before an appointment for the intervention was made and 5 workers did not participate in the intervention. Clinical intervention: Nineteen workers out of 55 were not compliant to the clinical intervention for the following reasons: interference with another practitioner (n=3), miscommunication (n=2), change of function/job (n=2), contraindications (n=5), not able to follow regime (n=3), drop-out from program (n=3) and distance to training centre (n=1).

Comparison	Only usual care provided by occupational physician. Attempt to minimise co-interventions by informing the patients' GP. Workers in all groups were not restricted in obtaining additional care for their LBP.
Participants (n)	32
Drop-outs (n, %)	None
Statistical analysis /adjustments	Effects of all outcome measures were expressed as differences within each intervention group between baseline and last follow-up. Bootstrapping was used for pair wise comparison of the mean differences between groups. Confidence intervals (95 % CI) were obtained by bias corrected and accelerated (Bca) bootstrapping (2 000 replications).
Outcomes	Primary outcome: Lasting RTW, defined as the duration of work absenteeism due to LBP in calendar days from the first day of sick-leave to full return to own or other work with equal earnings, for at least 4 weeks without (partial or full) drop-out. Secondary outcomes: functional status measured with the Roland Disability Questionnaire; pain intensity, measured on a 10-point numerical rating scale; general health status measured with a VAS scale; Quality of life measured using the Dutch version of the EuroQol, expressed as utilities.
Missing data	No missing data for primary outcome (RTW). Missing data for secondary outcomes: 12 %
Results	**RTW at 12 months follow-up** WI in first 8 weeks versus UC in first 8 weeks: Workers receiving the workplace intervention in the first 8 weeks returned to work on average 30.0 days (95 % CI= (3.1, 51.3)) **earlier** on average than workers receiving usual care during the first 8 weeks (not considering subsequent interventions). WI + CI versus WI + UC: Workers receiving WI in the first 8 weeks followed by CI returned to work on average 50.9 days (95 % CI= (−89.4, −2.7)) **later** than the workers receiving WI in the first 8 weeks followed by UC. UC + CI versus only UC: Workers receiving UC in the first 8 weeks followed by CI returned to work on average 21.3 days **later** (95 % CI= (−74.1, 29.2)) compared with workers receiving UC only. **Secondary outcomes at 12 months follow-up** There were no significant differences between groups on any of the secondary outcome measures. **Functional status, mean difference (95 % CI)** WI in first 8 weeks versus UC in first 8 weeks: 0.92 (− 0.81, 2.64) WI + CI versus WI + UC: 1.79 (− 1.85, 5.42) UC + CI versus only UC: 3.06 (− 0.07–6.19) **Pain severity, mean difference (95 % CI)** WI in first 8 weeks versus UC in first 8 weeks: 0.20 (− 0.57, 0.97) WI + CI versus WI + UC: 0.38 (− 1.13, 1.90) UC + CI versus only UC: 0.99 (− 0.48, 2.46) **Quality of life, mean difference (95 % CI)**

	WI in first 8 weeks versus UC in first 8 weeks: −0.04 (− 0.12, 0.04) WI + CI versus WI + UC: −0.05 (− 0.20, 0.11) UC + CI versus only UC: −0.11 (− 0.25, 0.03) **General health, mean difference (95 % CI)** WI in first 8 weeks versus UC in first 8 weeks: −1.77 (− 7.77, 4.24) WI + CI versus WI + UC: −2.52 (− 14.80, 9.76) UC + CI versus only UC: 8.45 (− 3.22, 20.12)
Health economic results	**Cost-utility analysis** This analysis estimated the cost per QALY. Included costs were direct health-care costs, direct non-health care costs and indirect costs. Incremental mean total costs at 12 months follow-up (95 % CI): WI versus UC: 116 EUR (− 1 790, 1 919) WI + CI versus WI + UC: −1 282 EUR (− 5 011, 2 589) UC + CI versus only UC: 348 EUR (− 2 722, 3 004) Incremental mean effect (QALYs) at 12 months (95 % CI): WI versus UC: −0.04 (− 0.12, 0.04) WI + CI versus WI + UC: −0.05 (− 0.20, 0.11) UC + CI versus only UC: −0.11 (− 0.25, 0.03) Incremental cost-effectiveness ratio (ICER): WI versus UC: - 1483 EUR per QALY. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 44 % of simulations were situated in the southeast quadrant indicating that WI is more effective and less costly than UC. WI + CI versus WI + UC: 24 416 EUR per QALY. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 56 % of simulations were situated in the northwest quadrant indicating that WI + CI is less effective and more costly than WI + UC. UC + CI versus only UC: 5447 EUR per QALY. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 59 % of simulations were situated in the southwest quadrant indicating that UC + CI is less effective and less costly than only UC **Cost-effectiveness analysis** This analysis estimated the cost per RTW. Included costs were direct health-care costs and direct non-health care costs. Incremental total costs without sick leave at 12 months follow-up (95 % CI): WI versus UC: − 556 EUR (− 1284, 282) WI + CI versus WI + UC: − 583 EUR (− 3 050, 1 917) UC + CI versus only UC: − 624 EUR (− 1 847, 733) Incremental effect (RTW) at 12 months (95 % CI): WI versus UC: 30.0 days earlier (3.1, 51.3) WI + CI versus WI + UC: 50.9 days later (−89.4, −2.7) UC + CI versus only UC: 21.3 days later (−74.1, 29.2) Incremental cost-effectiveness ratio (ICER):

	WI versus UC: 19 EUR per day. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 91 % of simulations were situated in the northeast quadrant indicating that WI is more effective and more costly than UC. WI + CI versus WI + UC: 11 EUR per day. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 73 % of simulations were situated in the northwest quadrant indicating that WI + CI is less effective and more costly than WI + UC. UC + CI versus only UC: 29 EUR per day. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 71 % of simulations were situated in the northwest quadrant indicating that UC + CI is less effective and more costly than only UC. Price year not reported.
Risk of bias	Moderate
Comments	The methodological quality of the health economic analysis within this study was assessed as moderate and the transferability to the Swedish setting was assessed as moderate. The assessment was conducted using SBU's checklist for trial-based health economic studies. In the analyses on effects on RTW and secondary outcomes, we used data from Anema et al. 2007 [3], to avoid double-counting.

Strand et al. 2001

Author	Strand et al.
Year	2001
Country	Norway
Reference	[80]
Study design	RCT
Setting	Outpatient rehabilitation clinic
Recruitment	Patients with back pain who were tested at baseline on performance tests of physical activities (n=162) were considered for participation; from these a total of 117 patients (72 %) who attended follow-up and had available work-status data were included.
Population	Patients sick-listed ≥8 weeks due to back pain (ICPC diagnoses L02, L03, L84 and L86) Age (mean, SD): I = 44.5 (10.1) years; C = 42.3 (11.7) years Female (%): I = 59 %; C = 64 % Sick leave: 100 %
Follow-up	At 12 months (for I-group also follow-up evaluations at 2, 6 and 10 months).
Intervention	Multidisciplinary rehabilitation program. 4 weeks with 6-hour sessions, 5 days a week; treatment included physical treatment (individual and group), education, cognitive and behavioural modification, and workplace intervention
Participants (n)	81
Drop-outs (n, %)	Unclear
Comparison	Control group Treatment in the community, not following a predefined treatment course; the majority (76 %) received physiotherapy intervention; most had more than 24 treatments
Participants (n)	36
Drop-outs (n, %)	Unclear
Statistical analysis /adjustments	Only complete case analyses, Student's t-tests
Outcomes	<u>Primary</u>: RTW – receiving no worker's compensation from the national insurance office, partial RTW was defined as nonreturners (registry data). <u>Secondary:</u> Physical performance (Pick-up test, scale 0-3, higher=worse; Sock-test, scale 0-3, higher=worse; Roll-up test, 8-point-scale, easily performed; fingertip-to-floor test, distance to floor I cm; lift-test, number of lifts during 1 min, more=better). Perceived functioning (Disability Rating Index, DRI, mean score of 12 items, VAS-scale 0-10, higher=worse).

	Pain (Norwegian Pain Questionnaire, NPQ, and VAS 0-10, higher=worse).
Missing data	Those with missing data (28 %) was excluded from the analyses.
Results	RTW: **RTW at 1 year** Multidisciplinary rehabilitation program: 47 % Control group: 58 % Test of between group difference NS: 11 % (95 %CI: -8 % to +30 %) Secondary: **Physical performance, perceived functioning, pain** None of the eight test measures differed significantly between the groups at 12 months
Risk of bias	RTW outcomes: Moderate Secondary outcomes: Moderate
Comments	Not ITT data

Tamminga et al. 2019 and 2013

Author	Tamminga et al.
Year	2019
Country	The Netherlands
Reference	[81]
Author	Tamminga et al.
Year	2013
Country	The Netherlands
Reference	[82]
Study design	Multi-center randomised controlled trial (RCT)
Setting	Hospital
Recruitment	Among cancer patients who were diagnosed at one of the participating hospital departments between May 2009 and December 2010.
Population	Patients diagnosed with cancer treated with curative intent at one of the participating hospital departments. Age (mean, SD): I = 47.1 (8.2) years; C = 47.8 (7.6) years Female (%): I = 98 %; C = 100 % On sick leave
Follow-up	1 year and 2 years
Intervention	Patient education and work-related support at the hospital. The intervention started at the onset of the study and was spread across a maximum of 14 months. It consisted of: (1) delivering patient education and support at the hospital by an oncology nurse or medical social worker, integrated into the usual psycho-oncological care in the form of 4 meetings that lasted 15 min each; (2) improving communication between the treating physician and the occupational physician by sending at least one letter to the occupational physician containing information about cancer patient's diagnosis and treatment and (3) drawing-up a concrete and gradual RTW plan.
Participants (n)	65
Drop-outs (n, %)	n= 16, 25 %
Comparison	Usual care
Participants (n)	68
Drop-outs (n, %)	N=11, 16 %
Statistical analysis /adjustments	Univariate Cox regression analyses were performed to study which early factors predict time to full RTW.
Outcomes	Primary outcome was RTW (rate and time) and quality of life (SF-36), and secondary outcomes were, work ability (WAI), and work functioning (WLQ).

Missing data	4 died and 23 declined to participate
Results	<u>Primary (RTW)</u> **RR** The relative risk of returning to work (either full or partial) for the intervention group versus the control group was 0.60 (95 % CI 0.19-1.8) at 2 years follow-up. **Median time** 1 year follow-up: Median time from the initial sick leave until partial RTW was 194 days (range 14-435) for the intervention group and 192 days (range 82-465) for the control group log rank test; p = 0.90). Median time from initial sick leave until full RTW was 283 days (range 25-394) for the intervention group and 239 days (range 77-454) for the control group log rank test; p = 0.52). 2 years follow-up: Median time from the initial sick leave to partial RTW was 307 days (range 136-922) for the intervention group and 435 days (range 357-768) for the control group (log rank test; p = 0.077). Median time from initial sick leave to full RTW was 363 days (range 19-832) for the intervention group and 344 days (range 136-922) for the control group (log rank test; p = 0.062). **Physical functioning mean (SD) (scale 0-100)** I: Baseline 76 (29), 1 year follow-up 81 (15), 2 years follow-up 83 (18) C: Baseline 74 (27), 1 year follow-up 79 (19), 2 years follow-up 81 (20) **Pain, mean (SD) (scale 0-100)** I: Baseline 67 (31), 1 year follow-up 76 (21), 2 years follow-up 77 (26) C: Baseline 70 (23), 1 year follow-up 76 (18), 2 years follow-up 77 (21) <u>Secondary</u> **Overall work ability, mean (SD), WAI, (Scale 0-10)** I: Baseline 5.5 (3), 1 year follow-up 6.6 (2), 2 years follow-up 6.7 (2.7) C: Baseline 5.5 (3.2), 1 year follow-up 6.8 (1.9), 2 years follow-up 7.0 (2.4) **Work functioning, WQL mean (SD), (Scale 0-100)** I: 1 year follow-up 28 (16), 2 years follow-up 26 (17) C: 1 year follow-up 25 (15), 2 years follow-up 21 (15)
Risk of bias	RTW: Moderate Quality of life: Moderate Work ability: Moderate Work functioning: Moderate
Comments	

van Beurden et al. 2017

Author	van Beurden et al.
Year	2017
Country	The Netherlands
Reference	[83]
Study design	Cluster RCT (Randomisation at the level of the OP)
Setting	Occupational health care
Recruitment	Written and oral information to occupational physicians (OP) at large occupational health service (OHS) centers. Recruitment period: October 2010 - January 2011.
Population	Sick-listed workers diagnosed with common mental disorder (according to the Dutch Classification of Diseases, based on ICD-10) by their OP. Age 18-64.
Follow-up	12 months.
Intervention	Guidance from OP trained in guidance adherence OPs in the intervention group received one year of regular training for better adherence to the Dutch guidelines ''Management of mental health problems of workers by occupational physicians''.
Participants (n)	<u>OPs</u> Randomised: 32 Remained at follow-up: 25 Females: 34.6 % <u>Workers</u> Allocated: 1493 Remained at follow-up: 1 429 Females: 60.5 %
Drop-outs (n, %)	7 OPs were lost to follow-up 64 workers were lost to follow-up
Comparison	Care as usual OPs in the control group did not receive specific training in guideline adherence, but guidelines are distributed to all Dutch OPs.
Participants (n)	<u>OPs</u> Randomised: 34 Remained at follow-up: 27 Females: 18.5 % <u>Workers</u> Allocated: 1 886 Remained at follow-up: 1 799 Females: 56.7 %
Drop-outs (n, %)	7 OPs were lost to follow-up 87 workers were lost to follow-up

Statistical analysis /adjustment	Intention-to-treat principle. Presented baseline characteristics (age, gender and contracted working hours; extracted from OHS registration system) for workers were similar. Note that randomisation was on the OP level. There were more women among OPs in the control group. Differences in mean time to return-to-work was analysed with Kaplan-Meier survival curves (without account for randomisation on the OP level). Cox proportional hazards regression to analyse time to full and first return-to-work. The cluster design was accounted for. The influence of baseline characteristics was evaluated and not found to change the overall result.
Outcomes	**Primary** Time to full RTW: number of calendar days between the first day of sickness absence and the first day of full RTW. (Data was extracted from the OHS registration system). Results also reported as: Percentage of workers with full RTW after 12 months Hazard ratio Intervention: Control for full RTW (with and without covariates). **Secondary** Total number of sick-leave hours over one year: with account for the total hours of the workers employment contract and partial return-to-work. Time to first RTW: return-to-work irrespective of the number of working hours resumed in a week and the duration of this period. Results also reported as: Percentage of workers with first RTW after 12 months Hazard ratio Intervention: Control for first RTW (with and without covariates).
Missing data	(Data on sickness absence and RTW were extracted from the OHS registration system). Workers were censored when the worker was lost to follow-up, or when the full RTW or the first RTW was not established within the follow-up period.
Results	**Mean time to full RTW (SD)** Intervention = 212 (158). Control = 214 (182). **Percentage of workers with full RTW after 12 months** Intervention = 81 %. Control = 81 %. **Hazard ratio Intervention: Control for full RTW (95 % CI)** HR = 0.96 (0.81 to 1.15) (without covariates) HR = 0.97 (0.82 to 1.16) (with covariates) **Total number of sick-leave hours over one year (95 % CI)** Intervention = 478 (425–530). Control = 483 (436–531). Difference between groups: -5.51 (-76 to 65) (P=0.88) **Mean time to first RTW (SD)** Intervention = 151 (173). Control = 158 (185).

	Percentage of workers with first RTW after 12 months Intervention = 89 %. Control = 87 %. Hazard ratio Intervention: Control for first RTW HR = 0.96 (0.80 to 1.15) (without covariates) HR = 0.96 (0.80 to 1.15) (with covariates).
Risk of bias	Moderate for all outcomes
Comments	

van den Hout et al. 2003

Author	van den Hout et al.
Year	2003
Country	The Netherlands
Reference	[84]
Study design	RCT
Setting	Referred to rehabilitation clinic
Recruitment	Employees who were recently on sick leave because of nonspecific low back pain were referred to the rehabilitation center by general practitioner, occupational physician, or rehabilitation physician.
Population	Nonspecific lower back pain Age mean (SD): intervention: 40.3 (9.3), control: 40.8 (8.4) Males (%), intervention: 73.3 % and control: 79.5 % On sick leave but no longer than 20 week and no more than 120 days during last year.
Follow-up	6 and 12 months
Intervention	Graded activity plus problem solving (GAPS) Problem-solving therapy (PST) in addition to behavioural graded activity. PST is a cognitive-behavioural therapy in which problem-solving skills are taught. Multimodal, including work
Participants (n)	45
Drop-outs (n, %)	4, 8.9 %
Comparison	Graded activity plus group education (GAGE) Behavioural graded activity
Participants (n)	39
Drop-outs (n, %)	4, 10.2 %
Statistical analysis /adjustments	Intention-to-treat. Chi2-test, multiple linear regression analyses. A sensitivity analysis was carried out in which sick leave was classified as 100 % work loss, regardless of part-time or therapeutic work-resumption. Outcomes based in this conservative classification were compared with those initially found.
Outcomes	Days of sick leave and work status.
Missing data	Unclear reasons
Results	**RTW at 12 months** <u>100 % RTW</u> Intervention Pre: 4/45, 12-month follow-up: 35/41 (85 %) Control Pre: 8/39, 12-month follow-up: 22/35 (63 %) p=0.114 **Days of sick leave, mean (SD)**

	Intervention Pre: 30.8 (24.7), n=45, 12-month follow-up: 18.5 (36.4), n=44 Control Pre: 41.3 (27.8), n=39, 12-month follow-up: 37.9 (50.1), n=39 (No statistical test reported) **Days of sick leave (results of multiple regression analyses)** Period (first half-year after intervention) As a result of back pain: treatment condition did not contribute to the model (std β 0.117) In general: treatment condition did not contribute to the model (std β 0.117) Period 4 (=second half-year after intervention) As a result of back pain: treatment condition did not contribute to the model (std β 0.247) In general: treatment condition did not contribute to the model (std β 0.284)
Risk of bias	RTW: Moderate Days of sick leave: Moderate
Comments	

van der Klink et al. 2003

Author	van der Klink et al.
Year	2003
Country	The Netherlands
Reference	[85]
Study design	Cluster-RCT (Randomisation at the level of the OP)
Setting	Occupational health care
Recruitment	OPs from a large private company (approximately 100 000 employees) spread over the country. Occupational physicians (OPs) of the occupational health service volunteered after an invitation. 96 % accepted the invitation. Patients were included from May 1995 to July 1996.
Population	Patients had to be on their first sickness leave because of an adjustment disorder (DSM IV), with recent (<3 months) identifiable psychosocial stressor and 8 of 17 distress symptoms.
Follow-up	12 months (3 months reported in the study)
Intervention	Intervention for adjustment disorder by trained OPs A three-stage model for adjustment disorders, based on the principles of time contingency and cognitive behavioural treatment. The main aim to activate patients to develop and implement problem solving strategies (according to a time contingent scheme) for daily working life problems. Occupational physicians in the intervention group underwent a three-day training course.
Participants (n)	<u>OPs</u> Randomised: 17 Remained at follow-up: 16 <u>Workers</u> Allocated: 109 Remained at follow-up: 66 Females: 34 % Age (SD): 39 (8.0)
Drop-outs (n, %)	Absenteeism data was derived for all workers. Questionnaire data for 44 (40 %) workers were lost to 12 months follow-up.
Comparison	Care as usual Occupational physicians in the control group received no training in guidance. The OPs in this group were aware of the three-stage model. In general, “usual” care was based on empathic counselling, instruction about stress, lifestyle advice, and discussion of work problems with the patient and company management.

Participants (n)	OPs Randomised: 16 Remained at follow-up: 51 Workers Allocated: 83 Remained at follow-up: 51 Females: 41 % Age (SD): 42 (8.8)
Drop-outs (n, %)	Absenteeism data was derived for all workers. Questionnaire data for 39 (%) workers were lost to 12 months follow-up.
Statistical analysis /adjustment	Intention-to-treat principle. Baseline differences of included and excluded patients, and between completers and drop-were analysed with ANOVA: When significant differences were found the variables were introduced as covariates (observed for age and hours of appointment) in the analyses. At baseline, the two groups did not differ significantly on the outcome measures. There were no significant differences between the two groups in symptoms reported on the checklist for inclusion or exclusion. Self report data: Multilevel analysis were performed, when possible, to account for clustering. Absenteeism data: Kaplan-Meier survival analyses (for means, medians and confidence intervals) and Cox's proportional hazards regression (for HRs and for significance testing). Analysis performed on both the cluster level (with cluster mean times for return-to-work, and cluster size as a covariate) and on the patient level (accounting for significant baseline differences with covariate for age and hours of appointment at the patient level). Incidence of recurrence: Mann-Whitney U test.
Outcomes	**Four-Dimensional Symptom Questionnaire (4DSQ)** Assesses psychopathology among patients attending general practitioners. **Symptom Checklist-90 items (SCL-90)** For measures of psychopathological screening and useful for evaluation of treatment effects. **Mastery Scale** Assesses the extent to which a person regards life changes as being under his or her control in contrast to being ruled by fate. **Absenteeism** Time too partial and too full return to work (the period between the onset of sickness leave and first return to work/partial work). Given as means and rate ratios. Duration of sickness leave (days lost until full return to work with a correction for partial return. Results as means and rate ratio. Time to recurrence (period between the moment of full return to work and recurrence of sick leave for any reason). Results as means.

Missing data	Incidence of recurrence in the year following full return to work (number of recurrences in a period of 12 months from full return to work). Results as means. There was no significant interaction with type of intervention and drop-outs. Analysis between completers on 12 months and drop-outs after inclusion revealed that there were significantly more males among completers, that they worked more hours per week, and had a lower incidence of prior absenteeism.
Results	**Four-Dimensional Symptom Questionnaire (4DSQ)** Mean distress at baseline (SD): Intervention = 21 (6.7). Control = 22.24 (6.7). Mean distress at 12 months (SD): Intervention = 7.47 (7.2). Control = 8.53 (7.6). Mean depression at baseline (SD): Intervention = 2.41 (2.8). Control = 3.45 (3.2). Mean depression at 12 months (SD): Intervention = 0.89 (1.9). Control = 0.84 (2.2). Mean anxiety at baseline (SD): Intervention = 3.99 (4.6). Control = 6.28 (6.19). Mean anxiety at 12 months (SD): Intervention = 1.33 (2.8). Control = 1.94 (4.0). Physical symptoms at baseline (SD): Intervention = 12.2 (6.1). Control = 12.8 (6.1). Physical symptoms at 12 months (SD): Intervention = 5.73 (5.0). Control = 6.22 (5.1). **Symptom Checklist-90 items (SCL-90)** Total score at baseline (SD): Intervention = 176 (44). Control = 190 (51). Total score at 12 months: Intervention = 124 (38). Control = 132 (38). **Mastery Scale** Mean at baseline (SD): Intervention = 3.22 (0.66). Control = 3.18 (0.69). Mean at 12 months (SD): Intervention = 3.42 (0.95). Control = 3.54 (0.77). (There were no significant differences between groups (no treatment effects) for the mean values at 12 months for any of the measures (4DSQ, SCL-90 or mastery). Outcomes were adjusted for baseline and clustering). Absenteeism **Cluster level results (95 % CI)** Mean time to (partial) RTW: Intervention = 36 (31 to 40) days. Control = 53 (44 to 62) days. Median time to (partial) RTW: Intervention = 37 (32 to 42) days. Control = 51 (35 to 67) days. HR partial RTW: 4.8 (1.91 to 12.02) (Significantly shorter RTW for intervention group, $p<0.05$) Mean time to full RTW: Intervention = 67 (51 to 83) days. Control = 94 (71 to 117) days. Median time to full RTW: Intervention = 60 (52 to 67) days. Control = 83 (79 to 88) days.

	HR full RTW: 2.39 (1.15 to 4.95) (No significant difference between groups, p=0.1) Mean duration of sickness leave: Intervention = 49 (40 to 58). Control = 73 (55 to 92). Median duration of sickness leave: Intervention = 46 (41 to 51]. Control = 67 (40 to 94). (Significantly shorter duration of sick leave for intervention group, p=0.02) Mean time to recurrence: Intervention = 187 (158 to 216). Control = 179 (156 to 202). Median time to recurrence: Intervention = 181 (156 to 206). Control = 162 (148 to 177). (No significant differences between groups, p=0.54) Mean incidence of recurrence in one year after full RTW: Intervention = 1.9. Control = 2.2. (No significant difference between groups, p=0.26) Full return to work rate at 12 months: Intervention = 100 %. Control=100 %. **Patient level results (95 % CI)** Mean time to (partial) RTW: Intervention = 36 (32 to 40) days. Control = 53 (44 to 62) days. Median time to (partial) RTW: Intervention = 33 (29 to37) days. Control = 38 (30 to 46) days. HR partial RTW: 1.61 (1.18 to 2.19) (Significantly shorter RTW for intervention group, p<0.05) Mean time to full RTW: Intervention = 69 (58 to 80) days. Control = 91 (75 to 107) days. Median time to full RTW: Intervention = 47 (41 to 53) days. Control = 63 (43 to 83) days. HR full RTW: 1.41 (1.04 to 1.92) (Significantly shorter RTW for intervention group, p=0.03) Mean duration of sickness leave: Intervention = 49 (43 to 55). Control = 70 (58 to 82). Median duration of sickness leave: Intervention = 41 (35 to 46). Control = 50 (44 to 56). (Significantly shorter duration of sick leave for intervention group, p<0.05) Mean time to recurrence: Intervention = 194 (174 to 213). Control = 173 (152 to 195). Median time to recurrence: Intervention = 186 (143 to 229). Control = 170 (121 to 219). (No significant difference between groups, p=0.24) Mean incidence of recurrence in one year after full RTW: Intervention = 1.8. Control = 2.3. (Significantly lower incidence in intervention group, p=0.02) Full return to work rate at 12 months: Intervention = 100 %. Control=100 %
Risk of bias	Moderate
Comments	

van Oostrom et al. 2010 and van Oostrom et al. 2010

Author	van Oostrom et al.
Year	2010
Country	The Netherlands
Reference	[86]
Author	van Oostrom et al.
Year	2010
Country	The Netherlands
Reference	[87], cost-effectiveness analysis based on trial data. Details reported in Table of included health economic studies.
Study design	RCT
Setting	Workplace
Recruitment	Recruited from employees sick-listed for more than 1 week, between April 2006 and May 2008.
Population	Employees with distress and sick-listed for 2-8 week Age, mean (SD): intervention 48.6 (7.7) and control 49.2 (8.6) Males (%): intervention 76.7 and control 80.6
Follow-up	12 months
Intervention	A workplace intervention. The participatory workplace intervention is a stepwise process involving the sick-listed employee and their supervisor, aimed at reducing obstacles for RTW by reaching consensus about an action plan for RTW.
Participants (n)	73
Drop-outs (n, %)	20 (27.4 %) did not receive allocated intervention
Comparison	Usual care
Participants (n)	72
Drop-outs (n, %)	2 (2.8 %)
Statistical analysis /adjustments	Intention to treat. The Cox proportional hazard model was applied to estimate HRs and corresponding 95 % CIs. Also includes adjusted data.
Outcomes	Lasting RTW, cumulative sickness absence and stress-related symptoms. Sick leave data were gathered from the continuous registration systems of the occupational health services after the 12 - month follow-up. Did not receive allocated intervention due to several including RTW, medical reasons, supervisor refused to participate, personal situation etc.
Missing data	-
Results	RTW

	After the 12-month follow-up, seven employees in the workplace intervention group and six employees in the usual care group did not achieve a lasting RTW. The median time until full and lasting RTW was 96 days (interquartile range (IQR) 52-193 days) in the workplace intervention group and 104 days (IQR 52-195 days) in the usual care group. The crude Cox regression analysis showed no overall effect of the workplace intervention compared with usual care. The unadjusted HR was 0.99 (95 % CI 0.70 to 1.39). **Secondary** Stress-related symptoms In both groups the severity of all stress-related symptoms improved significantly over 12 months ($p<0.001$). However, no differences were found between the improvements in the workplace intervention group and the usual care group. In total, 46 employees (32 %) still reported elevated levels of distress after the 12-month follow-up.
Risk of bias	RTW: Moderate Stress-related symptoms: Moderate
Comments	

Verbeek et al. 2002

Author	Verbeek et al.
Year	2002
Country	The Netherlands
Reference	[88]
Study design	RCT
Setting	The occupational health services of different academic and peripheral hospitals. The intervention was mainly provided by the occupational physician (OP).
Recruitment	The administrative worker or the occupational health nurse of the specific occupational health service informed eligible subjects about the project.
Population	Patients with low back pain on sick leave for at least 10 days. Mean age (SD): Total=39 (8.7). Intervention=38 (7.8). Reference=39 (9.6) Females (%): Total=67. Intervention=61. Reference=73. History of sick leave due to back pain year before study (% yes): Total=31 %. Intervention=33 %. Reference=29 %. (No significant differences between groups in baseline characteristics. No significant difference between patients that declined to participate and participating patients).
Follow-up	12 months. (In the study, outcomes were also reported after 3 months).
Intervention	Occupational Physician Group Early occupational health management by OP according to published guidelines. The OPs were trained before and during the project in the use of the guidelines. The guidelines consisted of a diagnostic part and an intervention part aiming at removing barriers for return to normal work. The patients could receive medical treatment by their general practitioners, therapists, and specialists as usual.
Participants (n)	n=61
Drop-outs (n, %)	2 patients did not visit the occupational physician during the intervention. (The baseline questionnaire (e.g., pain and function) was returned by 117 (98 %) patients in total. At 12 months the questionnaire was returned by 108 (90 %) patients in total. Sick leave data could be gathered for all participants through computerised records).
Comparison	Reference group Patients did not visit the occupational physician during the first 3 months of sick leave, if not insisting. If the patient did not work full-time after 3 months, he or she was still invited to visit the occupational physician. All the patients received standard medical treatment as usual by their general practitioners.

Participants (n)	n=59
Drop-outs (n, %)	14 patients in the reference group (24 %) went to see their occupational physician on their own initiative during the intervention.
Statistical analysis /adjustment	Intention-to-treat analysis. No significant difference in baseline characteristics between groups. Analysis of time-to-event data by Kaplan-Mayer survival curves and Cox proportional hazards regression. The χ^2 was used to check for differences in rate of return to work at 3 and 12 months. Baseline scores on the outcome parameters, patient characteristics, and perception of working conditions were checked for potential confounding with both outcome and group parameter (no significant confounders were found). The Mann-Whitney U test was used to test differences (data were not normal) between the groups after 1 year in pain intensity, functional disability, general health perception scores.
Outcomes	Primary outcomes (time-to-event): Time until return to work after 12 months. Secondary outcomes: Time until recurrence, rates of return to work, pain intensity (VAS scale), functional disability (Roland Disability Questionnaire), and the six general health perception scales (Nottingham Health Profile; Pain, physical mobility, lack of energy, emotional reaction, social isolation, and sleep problems). Health care utilisation was only reported over three months.
Missing data	For the secondary outcome the recurrences could not be determined for 12 patients that did not fully return to work, and for 9 patients the reason for second and subsequent absence could not be determined. These 21 cases were excluded from analysis. The baseline questionnaire (e.g., pain and function) was returned by 117 (98 %) patients in total. At 12 months the questionnaire was returned by 108 (90 %) patients in total. Sick leave data could be gathered for all participants through computerised records. No further information on the handling of missing data.
Results	Primary Median time-to-return to work (IQR): Intervention = 51 (22-110) days. Control = 62 (22-174) days. (No significant difference between groups, P=0.16). Hazard ratio (95 % CI) for return-to-work Intervention: Control=1.3 (0.9 to 1.9). Proportion returning to work after 12 months: Intervention=93 %. Control=86 %. (No significant difference between groups, P=0.2). Secondary Mean (standard deviation) Pain intensity (VAS) at 12 months: Intervention=24 (25). Control= 30 (26). Functional disability at 12 moths: Intervention=20 (22). Control=21 (23).

	NHP scores: Pain at 12 months: Intervention=18 (26). Control= 22 (30). Physical mobility at 12 months: Intervention=15 (20). Control=19 (21). Lack of energy at 12 months: Intervention=20 (34). Control= 10 (26). Emotional reactions at 12 months: Intervention=12 (23). Contro=8.7 (17). Social isolation at 12 months: Intervention= 4.5 (15). Contro= 3.4 (11). Sleep problems at 12 months: Intervention= 8.5 (19). Contro= 8.5 (21). (Differences between groups were not significant). Median time to recurrence: Intervention=262. Control=Could not be determined. Hazard ratio (95 % CI) for recurrence Intervention: control= 2.4 (1.2 to 4.7).
Risk of bias	Moderate
Comments	

Vermeulen et al. 2011

Author	Vermeulen et al.
Year	2011
Country	The Netherlands
Reference	[89]
Study design	RCT
Setting	Social Security Agency (SSA) and four large Dutch commercially operating vocational rehabilitation agencies.
Recruitment	Temporary agency workers and unemployed workers who were sick listed between one and 2 weeks due to musculoskeletal disorders (MSD) and lived in the eastern part of the Netherlands were recruited between March 2007 and September 2008.
Population	Temporary agency workers and unemployed workers who were sick listed between one and 2 weeks due to musculoskeletal disorders (MSD) Age, mean (SD): intervention: 44.0 (10.7), control: 45.6 (9.0) Male (%): intervention: 57.0 %, control 63.1 %
Follow-up	12 months
Intervention	Usual care + participatory return-to-work program
Participants (n)	79
Drop-outs (n, %)	7 (9 %)
Comparison	Usual care
Participants (n)	84
Drop-outs (n, %)	0
Statistical analysis /adjustments	Intention-to-treat and per-protocol. The Kaplan–Meier method was used to describe the duration until sustainable RTW in both groups. The Cox proportional hazard model was used to estimate hazard ratios (HR) for sustainable RTW and the corresponding 95 % confidence intervals Data adjusted for significant confounding factors.
Outcomes	The primary outcome measure was time to sustainable first return-to-work. Secondary outcome measures were duration of sickness benefit, functional status, pain intensity, and perceived health. Secondary outcome measures were duration of sickness benefit, functional status, pain intensity, and perceived health.
Missing data	Various reasons for drop-outs including recovery, offered other programs, refusing etc.
Results	**RTW** The median time until sustainable first RTW was 161 days (IQR 88–365 days) in the participatory RTW program group and 299 days (IQR 71–365 days) in the usual care group (log rank test; P = 0.12).

	Adjusted analyses found no effect of the intervention in the time <= 90 days (HR 0.76; 0.42-1.37) but a positive effect in the time > 90 days (HR 2.24; 1.28-3.94) The median total number of days at work during follow-up was 128 days (IQR 0–247 days) in the participatory RTW program group and 46 days (IQR 0–246 days) in the usual care group (no statistical test reported). Adjusted HR (95 % CI) for sustainable RTW after >90 days, I compared to C: 2.24 (1.28 to 3.94; p=0.005 Secondary No significant differences were found for the measured secondary outcomes
Risk of bias	RTW: Moderate Duration of sickness benefit: Moderate Functional status: Moderate Pain intensity: Moderate Perceived health: Moderate
Comments	Note that overall effect assessed as median time until first sustainable return to work was not statistically significant between group (log rank test), whereas this was the case in adjusted cox regression in favour of the intervention restricted to sustainable return to work >90 days.

Viikari-Juntura et al. 2012

Author	Viikari-Juntura et al.
Year	2012
Country	Finland
Reference	[90]
Study design	RCT
Setting	Occupational health units. Home and workplace.
Recruitment	An occupational health physician recruited them for the study.
Population	63 patients aged 18–60 years with musculoskeletal disorders (musculoskeletal pain in the neck or shoulder region, back, or upper or lower extremities) unable to perform their regular work. Age, mean (SD): Intervention 44.2 (10.1), control 44.4 (10.7) Female (97 %).
Follow-up	12 months
Intervention	Part-time sick leave, workload was reduced by restricting work time. The recommendation was to reduce daily working time by about a half, if necessary, remaining work tasks were modified to control exacerbation of activity-related symptoms.
Participants (n)	31
Drop-outs (n, %)	1 (3 %)
Comparison	Full-time sick leave
Participants (n)	31
Drop-outs (n, %)	5 (16 %)
Statistical analysis /adjustments	ITT and per protocol. Kaplan-Meier analyses were carried out to compare time to sustained RTW and the occurrence of recurrent sick leaves in the part- and full-time sick leave groups. Hazard ratios (HR) was estimated for return to work using Cox proportional hazard model with a cluster option. Adjusted for age, pain etc.
Outcomes	Time from recruitment to return to regular work activities. This was further specified as “sustained RTW for ≥2 weeks” and “sustained RTW for ≥4 weeks”. Numbers of sickness absence days (part-time and full-time) and their proportion of potential work time were calculated during the follow-up of one year.
Missing data	4 changed employers, 1 received partial disability pension.
Results	**RTW** Time to sustained RTW for ≥2 weeks was similar in the intervention and control groups (median time: 9 days in both groups), whereas time to sustained RTW for ≥4 weeks tended to be shorter in the intervention group (median 12 versus 20 days, P=0.10) (table 2). When we excluded the 12 subjects who did not fulfil the inclusion criteria regarding previous sickness absence, level of pain intensity, or pain interference with sleep, there were no major

	changes in these results. Hazard ratio of RTW adjusted for age was 1.60 (95 % confidence interval (95 % CI) 0.98–2.63)) and 1.76 (95 % CI 1.21–2.56) after further adjustment for pain interference with sleep and previous sickness absence at baseline. Total sickness absence during the 12-month follow-up was about 20 % lower in the intervention than the control group.
Risk of bias	RTW: Moderate
Comments	

Vlasveld et al. 2013 and Goorden et al. 2014

Author	Vlasveld et al.
Year	2013
Country	The Netherlands
Reference	[91]
Author	Goorden et al.
Year	2014
Country	The Netherlands
Reference	[92], cost-effectiveness analysis based on trial data. Details reported in Table of included health economic studies.
Study design	RCT
Setting	Occupational Health Services
Recruitment	Recruited within a large occupational health service in the Netherlands. Sick-listed workers between 4 and 12 weeks who met the Fourth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for MDD according to the mini-International Neuropsychiatric Interview and gave written informed consent were included in the study.
Population	126 sick listed workers with major depressive disorder. Workers on sickness absence between 4 and 12 weeks whose absence was diagnosed by the OP (occupational physicians) as due to mental disorders. Age, mean (SD): Intervention 41.9 (11.4), control 43.4 (11.4) Male (%): Intervention 46.2, control 45.9
Follow-up	12 months
Intervention	Collaborative care was applied by the occupational physician care manager, supported by a web-based tracking system and a consultant psychiatrist.
Participants (n)	65
Drop-outs (n, %)	5 (7.7 %)
Comparison	Usual care
Participants (n)	61
Drop-outs (n, %)	5 (8.2 %)
Statistical analysis /adjustments	Analyses were performed according to the intention-to-treat principle. In addition, per-protocol analyses were performed, comparing usual care participants with the collaborative care participants who had visited the OP-CM and examining the influence of the separate collaborative care elements (PST, antidepressant medication, psychiatric consultation, and the workplace intervention) as well. The duration until lasting RTW was analysed using accelerated lifetime (log duration) models.
Outcomes	The duration until full RTW
Missing data	Lost to follow-up

Results	RTW Within 1 year follow-up, 64.6 % of the collaborative care participants and 59.0 % of the usual care participants had achieved lasting, full RTW. The mean duration until lasting, full RTW, calculated from the day of randomisation, was 190 days (with a SD of 120 days) in the collaborative care group, and 210 days (with a SD of 124 days) in the usual care group. B=-0.198, SE=234, p>0.05, 95 %CI -0.657-0.261.
Risk of bias	RTW: Moderate Response on depressive symptoms: High Time to first remission: High
Comments	

Volker et al. 2015

Author	Volker et al.
Year	2015
Country	The Netherlands
Reference	[93]
Study design	Cluster RCT
Setting	Occupational Health services
Recruitment	Recruited by their occupational health service or employer between July 2011 and January 2013.
Population	Sick-listed (between 4- and 26-weeks) employees with common mental disorders. They screened positive (score ≥10) on either the depression scale of the PHQ-9 and/or the somatisation scale of the PHQ-15 and/or the GAD-7. Age, mean (SD): Intervention: 43.4 (9.5), Control: 45.5 (10.7) Sex (%): Intervention: Female 58.8 %, Control: 60 % Sick leave (full/partial %): Intervention: 27.5/72.5, control: 30/70
Follow-up	Up to 12 months
Intervention	Blended eHealth intervention (ECO) The ECO intervention included 2 elements: an eHealth module (Return@Work) for the employee aimed at changing cognitions of the employee regarding RTW and a decision aid via email supporting the occupational physician with advice regarding treatment and referral options based on monitoring the employee's progress during treatment. In total, the modules included 16 sessions.
Participants (n)	131
Drop-outs (n, %)	57 (43.5 %)
Comparison	Usual care The occupational physicians in the control group provided usual sickness guidance to their employees.
Participants (n)	89
Drop-outs (n, %)	32 (36 %), Not responding
Statistical analysis /adjustments	Per-protocol analyses were performed on the primary outcomes. In these analyses, the participants in the ECO condition who finished at least the introduction session of Return@Work were compared with the CAU participants. Cox regression analyses and multilevel logistic regression analyses. Not adjusted.
Outcomes	The primary outcome measures were time to first RTW (partial or full) and time to full RTW (register data).
Missing data	Minimal (n=4) for RTW (register data)
Results	**RTW** In all, 61 % (52/86) of CAU participants and 67.7 % (88/130) of the ECO participants achieved full RTW within the 1-year follow-up, ns difference. The median duration from baseline to full RTW was

	178 days (IQR 72.0-243.3) in the CAU group and 131 days (IQR 68.5-198.0) in the ECO group (mean 164.8, SD 93.4 days and mean 146.3, SD 91.2 days, respectively). The median duration until first RTW was faster in the intervention group 50 days vs 77 days, p=0.03
Risk of bias	RTW: Moderate Severity of depression, anxiety, somatisation: High (not tabulated)
Comments	Not ITT-analyses

Wormgoor et al. 2020

Author	Wormgoor et al.
Year	2020
Country	Norway
Reference	[94]
Study design	RCT
Setting	Nested in the clinical routine of the transdiagnostic program of an outpatient-clinic (non-hospital setting).
Recruitment	Patients were invited if "mental complaints" was the main reason for referral to the clinic.
Population	Patients (n=287) on, or at risk of, sick-leave due to substantial common mental complaints (anxiety and depression) Age (mean, SD): I = 40.3 (10.9) years; C = 42.9 (10.4) years Female (%): I = 68 %; C = 64 % Sick leave, fully (≥70 %): I = 52 %; C = 59 %
Follow-up	At 3-months post-intervention, and at 12 and 24 months
Intervention	Brief coping-focused psychotherapy (Brief-PsT). Both interventions were given as part of the "Rapid return to work program", embracing an interdisciplinary team of psychologists, physicians, physiotherapists and health educators; narrow focus on normalisation of common health complaints; work-site contacts/visits not incorporated; offering 2-day group education providing insights, understanding and coping with common health complaints, and a 5-day coping-course and individual coaching sessions; thereafter, participants started the psychotherapy alternative they were randomised to. Brief-PsT focused on normalising, accepting, and coping with present mental health complaints and their hindrance on work participation; standard duration aimed at 6 sessions, for the majority given within 26 weeks
Participants (n)	141
Drop-outs (n, %)	Excluded (withdrawn) n=2
Comparison	Short-term psychotherapy (Short-PsT). Initial treatment as the I-group. More extended focus; besides coping of mental health and challenges concerning WP, both an extensive anamnesis and the possibility to establish a "central theme" based on previous and currently challenging issues (e.g. trauma, difficult childhood); aims could include to reduce symptoms and problematic behaviour, and improvement of home situation, with deeper focus on cognitive maladaptive coping strategies or dynamic repetitions; standard duration aimed at 20 sessions, for the majority given within 52 weeks
Participants (n)	143
Drop-outs (n, %)	Excluded (withdrawn) n=1
Statistical analysis /adjustments	ITT-analyses (using imputation by LOCF); between-group differences at each follow-up tested with Mantel-Hanzel Linear by Linear association (X^2)

Outcomes	Primary: Work participation – sick leave ≤30 % of ordinary working time were considered as full-WP, 30-70 % as partial, sick leave exceeding 70 % as no-WP) (registry data).
Missing data	RTW outcome at 1-year: 8 % missing in Brief-PsT, 11 % missing in Short-PsT RTW outcome at 1-year: 8 % missing in Brief-PsT, 13 % missing in Short-PsT
Results	RTW **Work participation (WP) at 1 year** No WP – Brief PsT: 14.9 %; Short PsT: 25.2 % Partial WP – Brief PsT: 8.5 %; Short PsT: 10.5 % Full WP – Brief PsT: 76.6 %; Short PsT: 64.3 % X^2 test of between group difference: p = 0.019 (favouring Brief PsT) **Work participation (WP) at 2 years** No WP – Brief PsT: 15.6 %; Short PsT: 20.3 % Partial WP – Brief PsT: 5.0 %; Short PsT: 4.2 % Full WP – Brief PsT: 79.4 %; Short PsT: 75.5 % X^2 test of between group difference: p = 0.35 (NS)
Risk of bias	RTW outcomes: Moderate Secondary outcomes (depression, anxiety, etc.): High due to low response rate at 2 years.
Comments	

Included health economic studies

Brouwers et al. 2007

Author **Year** **Country** **Reference**	Brouwers et al. 2007 The Netherlands [16] associated with [15]
Study design **Population** **Setting** **Perspective**	RCT-based CBA and CEA with 18 months follow-up. Patients with emotional distress or minor mental disorders (according to general practitioner and self-report). Age 18-60. For inclusion, the patients had to be on sick leave (maximum 3 months), or plan to be on sick leave directly after visit to the general practitioner. Age, mean (SD): Intervention=39.4 (9.1) years; Control=40.1 (9.3) years. Female (%): Intervention=58.2 %; Control=60.4 %. Primary care. Intervention delivered by social workers. Usual care delivered by general practitioners. Societal
Intervention **vs** **control**	The intervention was given by social workers and comprised five individual 50-min sessions over 10 weeks. It aimed at activating and supporting the patient to restore coping and to adopt a problem-solving approach toward his/her problems. The intervention followed a three-step model (1. Acknowledge and accept problems, 2. Define problems an develop problem-solving strategies, 3. Implementation of strategies). Described in a treatment manual. Patients were encouraged to make daily activities and motivated to solve work-related problems actively, to get in contact with their occupational physician and discuss reintegration and to resume work as soon as possible. General practitioners' usual care, which comprised (any combination of) guidance and counselling by the GP, medication, and referral to mental health care.
Incremental costs, intervention vs control	Sick leave costs: -214 EUR (95 % CI -1 619 to 1 996) Health care costs: 89 EUR (95 % CI -67 to 246) Total costs, exclusive of the intervention costs:

	11 EUR (95 % CI: -1 818 to 1 816) Price year not reported.
Incremental Effect, intervention vs control	Multilevel analysis indicated that there were no significant differences between the two groups in improvement between baseline and 3, 6, and 18 months later on the MCS score, PCS score, or QALYs. The following incremental effects were reported (without confidence intervals or p-values): Incremental MCS score: -1.4 Incremental PCS score: 2.9 Incremental QALYs (Dutch values): 0.056 Incremental QALYs (UK values): 0.044
ICER	Incremental costs/Incremental MCS: 167 EUR. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 44 % of simulations were situated in the southwest quadrant indicating that collaborative care is less effective and less costly than usual care. Incremental costs/Incremental PCS: -81 EUR. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 56 % of simulations were situated in the southeast quadrant indicating that collaborative care is more effective and less costly than usual care. Incremental costs/QALY gained (Dutch values): -4 179 EUR. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 52 % of simulations were situated in the southeast quadrant indicating that collaborative care is more effective and less costly than usual care. Incremental costs/QALY gained (UK values): -5 306 EUR. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 53 % of simulations were situated in the southeast quadrant indicating that collaborative care is more effective and less costly than usual care.
Study quality and transferability*	Moderate quality. Moderate transferability to Sweden.
Further information Comments	We have tabulated the cost differences reported by the authors in the text. The authors state that effect sizes were missing in subjects with complete cost data and costs have a skewed distribution, and that because of this the cost differences in the cost-effectiveness analysis deviate from the cost differences estimated in the cost–benefit analysis and results reported in the text do not completely match those presented in tables.

*Assessed using SBU's checklist for trial-based health economic studies [95].

Goorden et al. 2014

Author **Year** **Country** **Reference**	Goorden et al. 2014 The Netherlands [92] associated with [91]
Study design **Population** **Setting** **Perspective**	RCT-based CUA with 12 months follow-up. 126 sick listed workers with major depressive disorder. Workers on sickness absence between 4 and 12 weeks whose absence was diagnosed by the OP (occupational physicians) as due to mental disorders. Age, mean (SD): Intervention=41.9 (11.4) years; Control=43.4 (11.4) years. Male (%): Intervention=46.2 %; Control=45.9 %. Occupational Health Services Societal
Intervention **vs** **control**	Collaborative care was applied by the occupational physician care manager, supported by a web-based tracking system and a consultant psychiatrist. Usual care
Incremental cost, intervention vs control	Health care costs: Collaborative care 3 874 EUR (95 % CI 2 778 to 5 718) Usual care 4 583 EUR (95 % CI 3 108 to 6 794) P-value for difference between groups not reported. Productivity costs: Collaborative care 10 110 EUR (SD=11 444) Usual care 11 627 EUR (SD=18 744) P-value for difference between groups not reported. Costs reported in year 2009 in EUR.
Incremental Effect, intervention vs control	-0.05 QALY (95 % CI -0.11 to 0.00)

ICER	Incremental direct costs/QALY: 14 589 EUR/QALY. Distribution of cost-effect pairs on the cost-effectiveness plane showed that 69 % of simulations were situated in the southwest quadrant indicating that collaborative care is less effective and less costly than usual care. Incremental total costs/QALY: Including the productivity costs did only. Slightly change the outcome of the analysis. 75 % of simulations were situated in the southwest quadrant indicating that collaborative care is less effective and less costly than usual care.
Study quality and transferability* **Further information Comments**	Moderate quality. Moderate transferability to Sweden.

*Assessed using SBU's checklist for trial-based health economic studies [95].

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Lambeek et al. 2010

Author **Year** **Country** **Reference**	Lambeek et al. 2010 The Netherlands [55] associated with [54]
Study design **Population** **Setting** **Perspective**	RCT-based within-trial CEA with 12 months follow-up. Adults with low back pain of more than 12 weeks duration. Employed or self-employed in a permanent and salaried position >8 hours/week, but presently absent or partially absent from work. The intervention was delivered within occupational care. Societal
Intervention **vs** **control**	Integrated care. This consisted of a workplace intervention based on participatory ergonomics, involving a supervisor, and a graded activity programme based on cognitive behavioural principles. The integrated care was coordinated by a clinical occupational physician (OP) and provided by a team consisting of the clinical OP, a medical specialist, an occupational therapist, and a physiotherapist. Usual care. Patients allocated to the usual care group received the usual treatment from their medical specialist, OP, GP, and/or allied health professionals.
Incremental cost, intervention vs control	Incremental direct costs: 217 GBP (95 % CI -131, 662) Incremental indirect costs: -5 527 GBP (95 % CI -10 160, -740) Incremental total costs -5 310 GBP (95 % CI -10 042, -391) Costs reported in GBP year 2007
Incremental Effect, intervention vs control	Difference in days until sustainable return to work: -68 (95 % CI -110, -26) Incremental QALY gained: 0.09 (95 % CI 0.01, 0.16)
ICER	Incremental direct costs/day until sustainable return to work: -3 GBP. Distribution of bootstrapped cost-effect pairs on the cost-effectiveness plane showed that 86 % of simulations were situated in the northeast quadrant

	indicating that integrated care is more effective but also more costly than usual care. Incremental total costs/QALYs gained: -61 000 GBP. Integrated care dominates. Distribution of bootstrapped cost-effect pairs on the cost-effectiveness plane showed that 98 % of simulations were situated in the southeast quadrant indicating that integrated care is more effective and less costly than usual care.
Study quality and transferability*	High quality. Moderate/high transferability to Sweden
Further information Comments	Indirect costs were estimated using the human capital approach.

*Assessed using SBU's checklist for trial-based health economic studies [95].

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Rebergen et al. 2009

Author **Year** **Country** **Reference**	Rebergen et al. 2009 The Netherlands [69] associated with [68]
Study design **Population** **Setting** **Perspective**	RCT-based CEA and CBA with 12 months follow-up. Police workers on sick leave due to mental health problems. Age, mean (SD): Intervention=38.8 (8.4) years; Control=40.0 (9.5) years. Female (%): Intervention=48.8 %; Control=39.5 %. Two police departments who had contact with the same occupational health service (OHS). The CEA was conducted from a societal perspective. The CBA was conducted from an employer perspective.
Intervention **vs** **control**	Guideline-based care (GBC) Occupational physicians (OPs) delivered the intervention after a 3-day training course in GBC; based on an activating approach, time contingent process evaluation, and cognitive behavioural principles; work-related interventions (gradual RTW, regular contact with supervisor, work accommodations) were proposed if the cause of the mental problems was work-related or resulted in work-disabilities Usual care (UC) Minimal involvement of the OP, and if applicable, easy access to psychologist in secondary care.
Incremental cost, intervention vs control	CEA: -520 EUR (95 % CI -980 to -59). Costs included primary care, occupational health care, hospital care and psychological care. Productivity loss due to sick leave were not included in the costs since difference in sick leave was the effect measure. Total health care costs were significantly higher in UC compared with GBC. CBA: -219 EUR (95 % CI -385 to -54). Costs included direct health care costs for the company. Price year not reported.

Incremental Effect, intervention vs control	CEA: 1 day (95 % CI -21 to 22). The mean difference in sick leave days net calculated under the assumption that subjects who participate during a sick leave period are 100 % productive during those hours. CBA: 88 EUR (95 % CI -2 600 to 2 776). The effect measured as the mean difference in productivity loss costs estimated using the human capital approach.
ICER	CEA: Incremental costs/incremental sick leave days (net) = -736 EUR. Distribution of bootstrapped cost-effect pairs on the cost-effectiveness plane showed that 52 % of simulations were situated in the southeast quadrant indicating that GBC is more effective and less costly than usual care. CBA: The estimated net monetary benefit of GBC from the employer perspective in terms of reducing productivity loss costs was 3 582 EUR.
Study quality and transferability*	Moderate quality. Moderate transferability to Sweden.
Further information Comments	We have tabulated the 95 % CI of the difference in health care costs reported in table 3. This differs slightly from the one reported in table 2 in the article and in the abstract.

*Assessed using SBU's checklist for trial-based health economic studies [95].

van Oostrom et al. 2010

Author **Year** **Country** **Reference**	van Oostrom et al. 2010 The Netherlands [87] associated with [86]
Study design **Population** **Setting** **Perspective**	RCT-based CEA, CUA and CBA with 12 months follow-up. Employees with distress and sick-listed for 2-8 weeks. Age, mean (SD): Intervention=48.6 (7.7) years; Control=49.2 (8.6) years. Males (%): Intervention=76.7 %; Control=80.6 %. Workplace The CEA and CUA was conducted from a societal perspective. The CBA was conducted from an employer perspective.
Intervention **vs** **control**	A workplace intervention. The participatory workplace intervention is a stepwise process involving the sick-listed employee and their supervisor, aimed at reducing obstacles for RTW by reaching consensus about an action plan for RTW. Usual care
Incremental cost, intervention vs control	CEA: 443 EUR (95 % CI -390 to 1723). Including costs of all health care utilisation and intervention costs. CUA: 1 846 EUR (95 % CI -3617 to 7630). Including costs of all health care utilisation, intervention costs and costs of productivity loss according to human capital approach. CBA: 584 EUR (95 % CI 321 to 820). Including the costs of occupational health services. Costs reported in year 2008 EUR.
Incremental Effect, intervention vs control	CEA: 0.71 days (95 % CI -34.8 to 36.2). The effect measured as the mean duration of sick leave until lasting RTW. CUA: -0.01 (95 % CI -0.06 to 0.04). The effect measured as QALY gained. CBA: 1 403 EUR (95 % CI -3 244 to 6 329). The effect measured as the costs of productivity loss according to human capital approach.
ICER	CEA: Incremental cost/difference in days until lasting RTW = 627 EUR. Distribution of bootstrapped cost-effect pairs on the cost-effectiveness plane showed that 42.1 % of simulations were situated in the northwest quadrant

	indicating that the workplace intervention is less effective and more costly than usual care. CUA: Incremental cost/QALY: -184 562 EUR. Distribution of bootstrapped cost-effect pairs on the cost-effectiveness plane showed that 55.1 % of simulations were situated in the northwest quadrant indicating that the workplace intervention is less effective and more costly than usual care. CBA: The workplace intervention resulted in extra costs for the employer because the costs of both the occupational health services and productivity loss were higher with workplace intervention than usual care. CEA and CUA revealed no statistically significant differences in lasting RTW, QALYs or costs. The CBA indicated a statistically significant higher cost of occupational health services in the workplace intervention group. The workplace intervention was not cost-effective according to the CEA, CUA and CBA.
Study quality and transferability*	High quality. Moderate transferability to Sweden.
Further information Comments	Indirect costs were estimated using the human capital approach. The article also reported estimates using the friction cost method, but these were not tabulated.

*Assessed using SBU's checklist for trial-based health economic studies [95].

Abbreviations

ACT	Acceptance and Commitment Therapy
ANOVA	Analysis of variance
AWaC	At Work and Coping
BAI	Beck Anxiety Inventory
BDI	The Beck Depression Inventory
BDI-II	Beck Depression Inventory II
BI	Brief intervention
C	Control
CAU	Care as usual
CBA	Cost-benefit analysis
CBP	Cognitive-behavioural return-to-work program
CBT	Cognitive behavioural therapy (gCBT = group CBT)
CDM	Convergence dialogue meeting
CEA	Cost-effectiveness analysis
CI	Confidence interval
CMD	Common mental disorders
CSQ	The Coping Strategies Questionnaire
CSR	Clinician severity rating
CTWR	Coordinated and Tailored Work Rehabilitation
CUA	Cost-utility analysis
df	Degrees of freedom
DKK	Danish Kroner
DRI	Disability Rating Index
EQ5D	Standardised tool to measure health outcomes after interventions, both in terms of disability and quality of life
EUR	Euro
FABQ	Fear-Avoidance Beliefs Questionnaire
FCE	Functional capacity evaluation,
FCT	Function-centered treatment

GBC	Guideline-based care
GEE	Generalised estimated equations
GHQ	General Health Questionnaire
GLMM	Generalised linear mixed model
GP	General practitioner
GPB	Great British pound
HADS	Hospital Anxiety and Depression Scale
HR	Hazard ratio
HSCL-25	Hopkins Symptom Checklist-25
I	Intervention
IBBIS	Integrated Mental Health Care and Vocational Rehabilitation to Individuals on Sick Leave Due to Anxiety and Depression
ICER	Incremental cost-effectiveness ratio
ICPC	International Classification of Primary Care
ICPC-2	International Classification of Primary Care 2nd edition
IMOC	Instrumental Mastery-Orientated Coping
INT	Integrated interventions
IPS	Individual Placement and Support
IQR	Interquartile range
ITT	Intention to treat
KEDS	Karolinska Exhaustion Disorder Scale
LBP	Lower back pain
LMM	Linear mixed-effects modeling
MADRS-S	Montgomery Åsberg Depression Rating Scale – self rated
MHC	Mental healthcare
MI	Multidisciplinary intervention
n	number of participants
NAV	Norwegian Welfare and Labour Administration
NOK	Norwegian krone
NP	Not provided
ODI	Oswestry Disability Index

OHS	Occupational health service
OP	Occupational physicians
OR	Odds ratio
OT	Occupational therapy
p	p-value
PAIRS	The Pain and Impairment Rating Scale
PE	Physical exercise
PSS	Perceived Stress Scale
QALY	Quality adjusted life years
QoL	Quality of life
QOLI	Quality of life Inventory
RCT	Randomised controlled trial
ROB	Risk of bias
RR	Relative risk
RTW	Return to work
SAU	Service as usual
SD	Standard deviation
SHC	Subjective Health Complaints
SMI	Stress-management intervention
SMT	Stress management training
T	Total
TAU	Treatment as usual
UC	Usual care
UCL	Utrecht Coping List
USD	United States dollar
VAS	Visual Analogue Scale
WAI	Work Ability Index
WDI	Workplace Dialogue Intervention
WSAS	Work and Social Adjustment Scale

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