Extraction tables

Interventions for both MSK and mental health conditions

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Xu et al. 2023 – *review*	30 RCT, of which 15 RCTs where participants reported to be on sick leave	6065 participants international review (Sweden leading with 5 studies)	**CBT based interventions** best when delivered face-to-face, with rehabilitation services, stress management, homework assignment and long treatment course (≥16 weeks)	Employees on sick leave and reduced hours	RTW Sickness absences	Moderate to high quality studies
Bond et al. 2025 *review*	9 RCT	2902 Participants international review (US leading with 5 studies)	**IPS** 6 RCTs for psychiatric disorders other than serious mental illness 2 RCTs for people with substance use disorders 1 RCT for spinal cord injuries IPS should be offered to veterans with PTSD.	Varied by study: employees on sick leave, at risk of going on sick leave and on long-term benefits	competitive employment rates, IPS fidelity	8 out of 9 RCTs worked in regard to competitive employment rates – low to medium level of quality
Brämberg et al. 2024 review	8 RCTs in 11 articles	A total of 3160 participants, all north European countries (Norway,	**Work-focused CBT (**3 RCTs CBT and 1 RCT ACT + 2 (large) RCTs combined with individual job support)	Employees on sick leave with common	Return to work, no of days on sick leave, income	Evidence was classified as low to very low

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
		Denmark Sweden, the Netherlands)	**Work focused team-based support** (2 RCTs) **IPS type** (2 RCTs – IPS and IES) no difference to standard care	mental disorders		

These studies below have a different target audience (longer sickness period / out of work period, severe mental illness or cancer), but studies still include useful information

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Probyn et al. 2021 *review*	10 RCTs	913 participants (6 x USA, Canada, Norway, Hong Kong, Sweden)	**Supported employment (SE)** interventions emphasise a place-and-train approach (as opposed to train and place) Supported employment interventions may be useful people with affective disorders, MH and justice involvement, veterans with PTSD, spinal injury, or formerly incarcerated veterans, people receiving methadone treatment, and NEETS	unemployed any condition (incl. MSK,PTSD, homelessness)+ severe mental illness	obtaining competitive employment	5 studies low risk of bias, 3 high risk of bias, and 2 some concern – high heterogeneity of studies, no meta-analyse possible

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Buresti et al. 2024 Scoping review	53 studies (varied types e.g. 25 longitudinal, 21 cross sectional, 3 RCTs)	Population size n/a Most studies conducted in Europe, but some also in Korea, India and Taiwan	**3 areas: studies of cancer on sick leave, employment, RTW,** **Studies reporting wider issues** **Studies reporting interventions / policies**	RTW for persons affected by cancer	employment status, RTW rate, changing work or type of work, sick leave period, early retirement, strategies of vocational rehabilitation, and job accommodations.	Evidence level not provided as such
Park et al. 2022 review	56 articles covering 54 studies	Large variability in participants numbers (up to 173,000 participants) timeframe: 6 weeks to 50 years). 1 six country trial in Europe, others single-country studies. 17 UK, 18 USA, and 8 Nordic countries.	**28 studies examined the economic case for IPS** **4 IPS augmented by another intervention** **24 other forms of Supported Employment (SE)** 43 studies (79%) reported a positive economic case for SE/IPS with three (5%) being negative and eight (15%) inconclusive	Range of audiences, including former pupils with learning disabilities, working employees, supported employment, on sick leave **(but on sickness leave for more than a year**)	Cost effectiveness cost per quality-adjusted life year (QALY) gained, net monetary benefits (NMBs) return on investment (ROI)	Studies were very heterogenous, quality was variable. But half of the studies had a quality score of more than 50%

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
De Boer et al. 2024 *Cochrane Review*	15 RCTs	1477 All in high-income countries, (3 x UK, 2 x Sweden,5 X Netherlands, 2 x Germany, 2x USA, 1 Australia (9 RCTs = breast cancer)	Physical interventions (four RCTs) and multidisciplinary interventions (six RCTs) likely increase RTW of people with cancer. Psycho-educational interventions (four RCTs) probably result in little to no difference in RTW, while the evidence from vocational interventions (one RCT) is very uncertain.	adults who had been diagnosed with any type of **cancer** and were in paid employment (employee or self-employed)	RTW (return to full time or part time work) Sick leave	*nine RCTs at low risk of bias and six at high risk of bias.*

Study on interventions with NEETS

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Stea et al 2024 *review*	8 RCTs and 1 quasi-randomized re-engagement study	9683 (range of countries, USA, Dominican Republic, Austira,2x France, Denmark, SA,Norway, Germany)	***5 studies had an effect on employment status, 3 on education / training*** IPS (effective / 2 studies), basic skills training (not effective), intensified support by case managers (not effective for work, but education), financial and non-monetary aid for drivers' licences (weak positive effect),	young people aged between 15 and 29 years who were not NEET at the time of recruitment	Participation in education and employment, and training status (15–29 years)	Variable quality, 3 studies had 9 out of 13 points, others lower (12 months was the longest followed up)

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
			Youth Unemployment program (weak short-term effect), Youth Employability program (increased job seeking), social and preventive medicine consultation (moderate impr.), individual coaching (effective only when fully attended)			

Reviews on Interventions for MH

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Nieuwenhuijsen et al. 2020 Cochrane review	45 studies (88 study arms)	in total 12109 world wide, - Europe leading with 34 studies.	***2 types of intervention groups:*** ***1. work-directed interventions,*** *i.e. addressing the work or the work-worker interface as part of the clinical treatment or as a stand-alone* ***intervention; and*** *2.* ***clinical interventions,*** *i.e. treatment of depressive disorder without a focus on work (e.g. exercise, art, improved care, antidepressants)* ***(note- read plain language summary)***	patients with depression on sick leave, off work, or working	RTW, Sickness absence days, being off work, effects on depression and work functioning	Moderate to low

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
			Conclusion: Workplace changes combined with a clinical programme: probably reduce the number of days on sick leave (on average, by 25 days for each person over one year; 9 studies; 1292 participants)			
Vega-campos et al. 2025 Scoping review	59 articles using the ACT intervention at worksites	n/a range of Countries incl. Iran, China, Us, Europe	**ACT = 10 conceptual papers And Empirical ACT :** Effectiveness in socio-health professionals N=23 Effectiveness in non-health care setting n = 19 Impact for RTW n = 7	Use of ACT for RTW – employees who completed their sick leave	RTW for this small group (of impact for RTW n=7) Results confirm that ACT-based interventions favor the return-to-work rate, although the results cannot be generalized	n/a (as it is a scoping review)

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Kalski et al. 2023 review	20 studies selected – all RCTs	A total of 5716 participants, mostly north European countries: 2xNorway, 7x Denmark 2x Sweden, 4xNetherlands, 1x Finland, 2x France & 1 x Switzerland	**Range of interventions** e.g. case manager involvement, Active individual treatment, physical exercise program etc **7 studies showed significant effect on RTW** **5 studies improved pain intensity and QoL** **6 studies improvements on disability** **A combination of activity, maintenance therapy, stretching, and manual therapy showed promising results in improving RTW**	Persons suffering from acute and chronic (non-specific) back pain and they received an occupational rehabilitation intervention or a jobrelated intervention, most were on sick leave	RTW, pain intensity, quality of life (QOL), degree of disability	8 studies high quality, 10 studies acceptable, 2 low quality
Russo et al. *review*	20 studies from 1999 onwards	Various samples sizes but in total 6038 (countries not provided)	**No intervention** – but evidence on prognostic factors (n=31) – listed in 3 categories: clinical factors, personal psycho-social factors, social workplace Older age, female, higher pain or disability, depression, higher physical work demands, and abuse of smoke and alcohol have shown strong level of evidence for negative outcomes.	patients with an episode of LBP and sick leave, with a duration of more than 12 weeks	Time away from work: sick leave or RTW	Thirteen studies high quality, 3 moderate quality, 2 low quality

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
			High global health well-being, great socioeconomic status, and good mental health conditions are decisive in RTW outcomes. Conclusion: interventions to focus on psycho-social aspects, health behaviours, and workplace characteristics			
IJzelenberg et al. 2023 *Cochrane review*	23 RCTs – 12 studies set in primary care	2637 9 x Europe 9 x Asia-Pacific region, 5 x North America	**Exercise therapy** is as effective as sham/placebo treatment, no treatment, or other conservative treatments for pain and functional outcomes in the short or long term in people with acute non-specific LBP	Adults with acute non specific LBP, with or without radiating pain	pain, functional status, and perceived recovery **2dary outcome: RTW**	10 studies low risk of bias, Studies show low certainty evidence
Aanesen et al. 2021 review	2 studies (RCT), Norway	1 RCT – n=89 (no effect) 2 RCT n=728, low risk of bias	**MI as solo intervention or in combination with other interventions**	Persons with MSK reasons for work absence, sick leave	RTW	This mapping review identified a large evidence gap on **MI** to increase return to work for individuals with musculoskeletal disorders.

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Audet et al. 2024 Scoping review	7 studies	From 2011 to 2020, 4 x Canada, 1 x us, 1x oz, 1 UK (Wilkie et al 2011)	**19 interventions mapped onto the cycle of work disability prevention**, including 4 RTW interventions (RTW plan, work accommodations, informing, ACT45+) **Interventions implemented throughout** (multi-component interventions, communication, support)	rehabilitation, return, and stay at work process of aging workers	n/a (scoping review)	No critical appraisal done

Reviews on interventions for OTs

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
De Dios Perez et al. 2023 review	20 studies (18 RCTs, one cohort study and one non-randomised study)	A total of 3866 participants, from 10 countries: Sweden (4) Netherlands (4), Denmark (3), Canada (2), UK (2), US (1), France (1), Switzerland (1), Germany (1), Australia (1)	Effectiveness of OT interventions for supporting RTW following illness or injury remains unclear. Most studies reported OT interventions within an MDT programme. Key intervention components (and most frequently employed) vocational assessment, goal setting and self-management. Further listed components: Work hardening, vocational counselling / education, case	Adults (+16) in paid employment who were absent from work due to an injury or long-term physical or mental health condition (time away from work is	RTW, work status (working or not)	17 Studies have a high risk of bias

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
			management, return to work planning and coordination Key mechanisms of action: early intervention, individualised support and being responsive to needs.	not specified here)		
Johanson et al. 2023 review	9 studies published between 2002-2022	A total of 2082 participants, Denmark (2), Japan (1), Australia (1) USA (2), Sweden (1), Netherlands (1), Multi-site (1)	Supported employment (SE) and Individual Placement and Support (IPS) was cost-effective. However, there is a mixed picture for IPS regarding cost depending on context, country and how it was measured, but overall, it was considered to be cost effective.	people with mental health disorders who were on sick leave, fully or partially employed or unemployed and 18-67 years of age	Outcome measurement: cost-utility, cost-effectiveness, cost-minimisation, or cost-benefit	methodological quality varied considerably (three studies high quality, 3 medium and 3 low)
Liedberg et al. 2021 Qualitative synthesis review	18 qualitative studies	A total of 504 participants, 299 patients (127 males and 172 females), 187 health care professionals, and 18 employers.	Factors and interventions were described at different levels (societal, structural, individual) Five themes: 1. Societal structures influencing interventions; 2. Participating professionals' approach; 3. The need of support; **4.** Parameters for personal change of behavior**;** 5. Facilitating interventions in the workplace. (each theme has several subthemes)	Patients, health care professionals, employers	RTW and staying at work	13 studies were rated as good quality and five were rated as moderate quality.

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
		South Africa (1), Asia (1), Australia (1), North America (2), Europe (13)				

Source	Scale of review / study	Population and size	Intervention name	Target group	Outcome variables	Evidence-level
Noteboom et al. 2024 *review*	26 studies including a qual only or qual and quant component on the barriers and facilitators for the VR interventions	USA 11 Europe 13, 1x Canada 1 X Australia	**Coordinated VR intervention:** stakeholders from the mental health and social security sector collaborate on the development / organisation of the intervention **Integrated VR intervention:** supported employment or IPS where employment services are often integrated in mental health services 21 articles reported on the implementation of SE (of which 14 articles were on IPS).	participants involved in the implementation: professionals, managers or directors, also participants of the VR intervention; and stakeholders or professionals from both the mental health care sector and the social security sector during implementation	Barriers and facilitators	19 studies with good reporting quality, six with moderate quality and 1 study with mod-low quality

Individual articles

Source	Type of study	Population and size	Intervention name	Target group	Outcome variables	Outcome
Hellstroem et al 2023	secondary analyses on data for the IPS-MA trial	289 participants from Denmark	***Individual Placement and Support Mood and anxiety disorders (IPS-MA) – trial compared intervention with vocational services as usual (job centre)***	people with depression and anxiety disorders who were on sick leave	competitive employment or education 2 years after enrolment in the trial	age (p = 0.030) and readiness to change (p = 0.003) remained significantly associated with return to work or education after 24 months
Barclay et al. 2024	Qual study (interviews) – part of an RCT	peer mentors (n = 4); vocational therapists (n = 3); patients (n = 24) Australia	**early intervention vocational rehabilitation (EVIR)** setup: vocational therapists embedded within rehabilitation teams across **two hospitals** working with patients who had sustained major traumatic injuries (SCI, TBI and MTO) and with paid peer mentors who had the lived experience	Patients with traumatic brain injury (TBI), spinal cord injury (SCI), multi-trauma orthopaedic injury and/or amputation (MTO),	N/A – but 13 of the 24 patients interviewed had returned to work by the time of the interview	Inclusion of hospital based peer mentors was valuable. adequate preparation and matching of the mentees / mentors is important
Le Cam et al. 2025	Cohort study	N=251 France	**MRP 4 weeklong programme: 5 days per week and 6 hours per day.** The multidisciplinary healthcare team consisted of	Patients from the rheumatology department	RTW at last follow-up 6 months	50% of patients had returned to work. Patients

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			trainers in physical activities, physiotherapists, a rheumatologist, a pain physician, an occupational therapist, a psychomotor therapist, a psychologist, a social worker and a dietician. Activities: stretching, muscular strengthening, cardio training, motor-control, balneotherapy, adapted physical activities + patient education	with CLBP, professional difficulties , more than 1 month, less than 1 year sick leave or unemployed		with chronic low back pain and professional difficulties need to be included quickly in a MRP, with specific attention to beliefs about pain.
Cashin et al. 2023	3 armed RCT	514 control (n=174), (MI) (n=170), (SVAI) (n=170) Norway	**MI arm:** collaborative relationship with participant and case worker **SVAI:** advice from trained physiotherapists – signposting to other services	Workers on sick leave due to a musculoskeletal disorder	sickness absence and RTW	MI and SVAI both worked in reducing the sickness absence days
Vanovenberghe et al. 2020	RCT	265 Intervention n=124, control n=141 Belgium	**MI (based on SDT) compared with CAU** MI is based on four principles: expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy.	patients receiving a disability benefit (3 to 6 months after the onset of the sickness period) 59% had MH 48.5% had MSK	RTW and relapse	MI group showed faster RTW and had a lower chance of relapse

Source	Type of study	Population and size	Intervention name	Target group	Outcome variables	Outcome
				3.5% other		
Kim & Yoon 2023	Mixed method: development of mobile based D-RTW – pre& post test research design	Intervention group n=18 Control n=24 South Korea	**multidisciplinary RTW intervention program specifically tailored to cancer survivors** our program included oncology nurses, oncologists, industrial nurses, exercise prescription specialists, and clinical psychologists + app development	**cancer survivors** on sick leave or unemployed	Decent return to work D-RTW	6-week mobile-based RTW program had a positive effect on stress reduction
Weemaes et al 2024	Single blind RCT	Coach n=47, control n=50 Netherlands	**six-month remote coaching intervention delivered by a community-based sports organisation to increase physical activity levels**	**Oncology** patients with physical, and/or psychosocial complaints and/or chronic fatigue; and who had completed a 10 week exercise program	Aerobic capacity, muscle strength, HrQoL, Fatigue, Anxiety & depression, RTW	the supervised exercise oncology rehabilitation program with a six-month remote coaching intervention was not effective, however there was an uptake of PA (not significant)