Implementing Employability Interventions for Workers with Health Conditions:

A Systematic Review

Kevin Daniels[1], Helen Fitzhugh[1], Rayhaan Nooraya[1]

[1]Employment Systems and Institutions Group
Norwich Business School
University of East Anglia
NR4 7TJ
United Kingdom

Corresponding author: Kevin Daniels, Employment Systems and Institutions Group, Norwich Business School, University of East Anglia, Norfolk, NR4 7TJ. Tel: +44 1603 591180; Email: kevin.daniels@uea.ac.uk.

Helen Fitzhugh: h.fitzhugh@uea.ac.uk

Rayhaan Nooraya no longer works the University of East Anglia.

Declarations of interest: none.

Acknowledgements: We acknowledge the support of our funder, UK Government Treasury/Cabinet Office. For their input into developing our search terms, we acknowledge the contributions of the following: Paula Brough, Cigdem Gedikli, Susannah Johnston, Ewen MacKinnon. We acknowledge the support of our project manager Philipp Dreyer.

To appear in *Social Science and Medicine*. This is not the copy of record.

Abstract. Health conditions are a major source of economic inactivity in working age adults. We conducted a systematic review of eight databases to identify factors that influence the implementation of effective interventions for workers with health conditions. We reviewed 55 separate studies of interventions to improve employment and/or health outcomes for workers or those seeking work. Findings were synthesized into evidence-statements (e.g., "Facilitating governance structures are associated with a) efforts at continuation and adaption of interventions and b) learning structures and activities"). The evidence-statements were synthesized into a theory of change to explain the level of implementation of interventions, employment, health, and work performance outcomes. The theory of change considers factors related to: the employing organization's external and internal environment (e.g., labor market legislation), intervention management, intervention features, and a range of stakeholders (e.g., intervention recipients, line managers, health professionals). We identified gaps in the literature, including knowledge of how implementation factors relate to cost-effectiveness and knowledge on how interventions and organizations are adapted to fit with each other. This systematic review is registered on PROSPERO (CRD42024591723).
Keywords: Return-to-work; stay-at-work; long-term absence; sickness disability; implementation.

Highlights

- Implementation is important for interventions for workers with health conditions.
- We identify factors which may aid the implementation of effective interventions.
- We develop a theory of change to explain intervention implementation.
- We identify areas for future research on implementation of interventions.

1. Introduction

Health conditions amongst working age adults have major societal and economic implications. Aside from economic impacts on individual income, health-related exclusion from employment can have adverse impacts on social inclusion and access to decent work (Bickenbach, 2020; Lawson & Beckett, 2021). Such exclusion has implications for the distribution of tax revenues on social protections (Schonfield et al., 2011).

Some types of intervention can be effective for returning workers with health conditions to work, for example, individual placement and support (Metcalfe et al., 2018) and national policies that support employers to make workplace accommodations, adjustments and other flexible policies (Clayton et al., 2011). . Not all interventions targeted at workers with health conditions provide successful outcomes, in terms of health, performance, or sustained employment. One reason for variability of outcomes may be how those interventions are implemented (Egan et al., 2009). Implementation is "the dynamic process of adapting the program to the context of action while maintaining the intervention's core principles" (Herrera-Sanchez et al., 2017:4). That is, the failure of interventions may be related to barriers and facilitators to implementation (Nevala et al., 2015).

There have been multiple reviews of the implementation of workplace health/wellbeing interventions in general (Daniels et al., 2021) and for specific conditions (Nevala et al., 2015; Yarker et al., 2022; Paterson et al., 2024; Zhao et al., 2023). There have been reviews of the effectiveness of interventions focused on sustained economic activity for workers with health conditions or disabilities (e.g., Clayton et al., 2011; Derbyshire et al., 2024; Wong et al., 2021). However, there are no recent reviews that have synthesized the evidence uniquely on how effective interventions focused on sustaining economic activity in workers with health conditions are managed and implemented, and none that have also examined performance outcomes for workers with health conditions. The last review we are

aware of included studies published up to 2010 (Hoefsmit et al., 2012), did not consider performance, and did not examine the management of effective interventions. Correspondingly, the purpose of this review is *to identify the factors that influence the implementation of effective interventions for workers with health conditions in terms of return to work, health outcomes and/or other work performance outcomes other than sustained return to work.*

An intervention can be defined as an "action or programme that aims to bring about identifiable outcomes" (Rychetnik et al., 2004: 540). In this context of this review, we consider interventions to be intentional actions, initiated by an external agency (e.g., government, employer), designed to rehabilitate sick-listed working age adults into work or maintain sustained employment for workers with a disability or health condition. We consider all health conditions or disabilities as in scope, so our review encompasses any literature focused on mental or physical health conditions and disabilities.

Following a review of implementation frameworks for occupational health interventions, Daniels et al. (2022) concluded many frameworks do not account sufficiently for factors such as how organizations come to change, power dynamics and how organizations pursue other, salient objectives (e.g., profitability) relative to employee health outcomes. Although we used comprehensive frameworks developed to address such shortcomings in our analysis (Daniels et al., 2021, 2022), our approach was abductive. This allowed us the potential to integrate factors salient to organizational, employment and labor market contexts not covered in other models and frameworks. Our broad theoretical approach was based on realist evaluation principles and Context, Mechanism, Outcome configurations (Pawson & Manzano-Santaella, 2012). We took this approach because it is suitable for developing a theory of change, for example by linking the activation of specific mechanisms to specific contextual features present in effective but not ineffective interventions.

2. Methods

Based on prior similar reviews (e.g., Daniels et al., 2021), we anticipated extracting qualitative and quantitative data. We adopted a mixed-methods approach to synthesize data from both qualitative and quantitative studies. The review protocol followed the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P, Shamseer et al., 2015; Page et al., 2021). Figure 1 shows the bibliographic databases searched, the dates, and results of the searches. The protocol contains the full search strategy, search terms, inclusion and exclusion criteria. Amendments to the protocol are listed with the protocol. Filters used in the databases can be obtained from KD or the authors' institutional repository. Search terms were checked by academic and policy subject matter experts to ensure a wider coverage of intervention types and approaches.

2.1. Criteria for inclusion/exclusion

We used the PICOS framework (population, intervention, comparison, outcomes and study design, Shamseer et al., 2015) to guide the inclusion/exclusion criteria.

Population: Working age adults with existing health conditions, whether work is the primary cause or not.

Intervention: Interventions designed either to rehabilitate sick-listed working age adults into work or maintain sustained employment for workers with a disability or health condition.

Comparison: Factors which might influence the implementation of interventions. Studies were required to report on the extent of changes in one or more of the following: employment, workability, health, wellbeing, and performance. This was to allow comparisons between interventions that improved such indicators, those that had no effects, and those that had adverse effects.

Outcomes: Primary outcomes relate to return to work and other health/wellbeing outcomes for workers with health conditions. Other outcomes of interest relate to worker performance.

Study Designs: Qualitative or quantitative studies that investigate the process of implementing focal interventions. Studies examining implementation factors that are based purely on 'treatment as usual' situations were excluded.

Other: Empirical research published in an English language peer-reviewed journal. The rationale for this was that there was a sufficient wealth of data within peer-reviewed research and peer-review provides an assurance of quality and rigor.

2.2. Study selection

At least two independent reviewers coded the studies at every stage. At title/abstract sifting, a paper was moved to full text sifting if at least one reviewer thought it could meet the inclusion criteria. Full texts were moved to data extraction if both reviewers thought the paper could meet the inclusion criteria. Where reviewers disagreed, resolution was achieved through discussion including the third reviewer. This review's purpose required us to identify effective and, for comparison purposes, non-effective interventions. Not all studies that reported on implementation reported on effectiveness, and often, authors will report in several papers the results of single studies. Accordingly, we searched for related papers for additional implementation, effectiveness, or cost-effectiveness data, given cost-effectiveness is a form of effectiveness. We searched for additional papers by cross-referenced papers in the focal paper, using Google scholar's related-articles-search function, searching for papers citing protocols mentioned in the focal paper, and papers from the same research project (identified by e.g. funder and grant number). The searches resulted in 55 studies for data extraction described in 141 separate papers.

2.3. Data extraction

We developed an outline framework and a coding structure (Popay et al., 2006). The framework linked various factors that may affect either the implementation of an intervention or the activation or inhibition of specific mechanisms that link the intervention to a change in outcomes from baseline. The coding structure was developed and refined from coding frames used in a comprehensive review of factors affecting the implementation of workplace health/wellbeing interventions (Daniels et al., 2021), a systematic review of conceptual frameworks of implementation of workplace health/wellbeing interventions (Daniels et al., 2022), and findings from related systematic reviews (e.g., Snippen et al., 2019).

The coding framework formed the basis of data extraction sheets for each study. Data extraction sheets were piloted and refined prior to extraction. During data extraction, we remained open to adding codes inductively to the coding frame. One additional code was added (characteristics of non-work context). Table 1 shows the coding frame and definitions of each code.

All papers related to each study were read by at least two and the same reviewers. The coding frame was embedded in the data extraction sheets, so reviewers could record data for each code. One reviewer then reviewed all data extraction sheets and coded for each study: the level of implementation of the intervention; the effectiveness of the intervention; the extent to which data relating to each other code represented evidence for facilitating or hindering the intervention. We cross-tabulated data to give an initial orientation of factors that may relate to intervention implementation and effectiveness (Popay et al., 2006). We compared between: i) interventions with varying levels of implementation; ii) interventions with varying levels of effectiveness; and iii) combinations of levels of implementation and effectiveness as outlined in Table 1. Six studies reported on factors that may have affected

implementation, but did not supply sufficient data to determine the level of implementation. These studies were retained to provide additional contextual data on effective interventions.

We used thematic analysis to synthesize the data in the form of evidence-statements. This was an iterative process in which data extraction sheets were re-examined for data on specific studies for the narrative synthesis. A detailed derivation of the evidence-statements is available from KD or the authors' institutional repository. Other data extracted and summarized in data extraction sheets were used as contextual data (e.g., industrial sector, country, intervention features, type of health condition/disability). Where contextual data revealed potential moderators of the effects of implementation factors, these were noted in the evidence-statements as sub-clauses. The evidence-statements were agreed amongst the review team. The evidence-statements were developed into a theory of change.

For each study, two reviewers made comments on the overall quality of the research design and analysis for quantitative analyses (around e.g., randomization, statistical power, attrition) and qualitative analyses (e.g., number of interviews, transcriptions, use of data analysis software). Two reviewers examined data relating to quality statements on research designs to arrive at an overall rating of the strength of evidence underpinning each statement. A written justification was provided for each rating. We used a four-fold classification of the strength of evidence (Snape et al., 2017) used in previous reviews of workplace interventions (e.g., Daniels et al., 2021). The classification is based on GRADE and CERQual criteria. The classification is:

Strong evidence: Finding is robust.

Promising evidence: Finding might be robust, requires further investigation.

Initial evidence: Less confidence than promising evidence, further investigation is required.

No evidence: Insufficient evidence to draw conclusions.

3. Results

Table 2 summarizes the included studies. Table 2 shows a variety of included health conditions, research designs, intervention types, and outcome measures. Further, there is heterogeneity in national context: The Netherlands (24) produced the largest number of studies, followed by USA (8), UK (6), and Sweden (5).

Table 3 shows the evidence-statements in respect of codes shown in Table 1, their evidence gradings, the justification for each grading, and the studies that contribute to each evidence-statement. Table 3 also includes areas where we conclude there is not yet sufficient evidence ('no evidence') for reasons such as inconsistency of results across studies and/or a small number of relevant studies. Differences between interventions, contexts, or conditions were surfaced in the studies, where specific relevant characteristics were incorporated into evidence-statements (e.g., labour market conditions, Evidence-statement#1a).

An overriding finding (baseline evidence-statement) is that some level of implementation is required for effectiveness. The baseline evidence-statement therefore indicates implementation does matter for effectiveness and implementation is not guaranteed.

We found no evidence on sequencing of intervention activities and intervention effectiveness. Sequencing of activities is an integral part of the fidelity of many interventions, yet prescribing a sequence can also be restrictive and prevent useful adaptations in the light of implementation experience. It may be the case that, for example, standardized sequencing does not matter, or a standardized sequencing of activities matters in some instances and flexible sequencing is more important in others. Further, a prior review of workers with and without health conditions found that continuity, perseverance, and adaptation of interventions to be critical success factors differentiating effective and non-effective workplace interventions focused on markers of wellbeing (Daniels et al., 2021). Although we found continuity, perseverance, and adaptation of interventions to be associated with effective

interventions in this review, we found this to be nuanced (Evidence-statement#6a). This may reflect that workers with health conditions face additional barriers compared to those without.

It is worth noting evidence on specific stakeholders. We found only initial evidence on the role of actors in the non-work context (Evidence-statement#10), no evidence for co-workers, highly conditional evidence for senior managers (Evidence-statement#12), and only that line managers can hinder rather than support interventions (Evidence-statement#11). There is evidence from other reviews that actors in the non-work context influence return to work (Snippen et al., 2019), supportive line managers and co-workers are important in facilitating return to work (Etuknwa et al., 2019), and senior managers are important for the implementation of workplace health/wellbeing initiatives (Daniels et al., 2021; Paterson et al., 2024). For senior managers, our evidence-statement is therefore bounded to interventions with minimal organizational involvement. The role of co-workers remains unknown, but supportive co-workers could be important. In relation to non-work actors and line managers, previous reviews have included observational studies. This review focuses on intervention studies. Therefore, where there is innovation in return-to-work practice (i.e., a novel intervention), it might be important to prevent negativity towards the intervention or return-to-work from line/middle managers and relevant non-work actors.

3.1. Synthesis: Developing a theory of change

The evidence-statements are summarized in a theory of change, shown in Figure 2. Figure 2 is based on evidence-statements for which there is initial, promising, or strong evidence. The arrows in Figure 2 are coded according to the strength of evidence for each relationship. Across the top of Figure 2 are features of the management of the intervention or the intervention itself. Across the bottom are the key stakeholders, either internal to employing organizations (intervention recipients, line managers or senior managers) or those

associated with health or employability service providers (professional service delivery staff, physicians, the organizations as stakeholders in their own right). To the left-hand of the figure are factors connecting organizations' internal and external environments. Factors listed across the top, bottom, or left side of the figure represent facilitating or hindering factors, either generically (e.g. intervention features) or more specifically (e.g. labour market conditions). In many cases, hindering factors can be overcome, but facilitating factors do not guarantee intervention implementation or effectiveness. The center illustrates the link between implementation, health and employment outcomes, and performance outcomes.

Missing from Figure 2 is any link between stakeholders in the non-work context or the nature of the non-work context, because stakeholders in the non-work context do not appear to influence employability and health interventions (Evidence-statement#10) and there is not yet sufficient evidence on other aspects of the non-work context. Also, because there is not yet sufficient evidence for the role of co-workers and a range of other factors, these are not illustrated in Figure 2. In explaining Figure 2, we start at the top-left (intervention management) and move clockwise around the outside, and finish with the center of the Figure.

In relation to intervention management, facilitating governance structures will include structures and procedures for gathering and acting on data on intervention effectiveness and implementation to ensure continuation and adaptation of interventions to prevailing organizational contexts (Evidence-statement5b: Strong; Evidence-statement#7: Strong). Governance needs to be proactive, ensuring the co-ordination and integration of intervention components systemically and frequently across the entire scope and reach of the intervention and its interface with other parts of the organization (Evidence-statement#5a: Strong: Evidence-statement#6a: Promising). Effective and consistent on-going governance of interventions may help overcome problems implementing interventions, including difficulties

coordinating and integrating a specific intervention with concurrent interventions (Evidence-statement#3: Initial) and hindering factors associated with organizational cultures and politics, such as pre-existing conceptions around health/wellbeing and routinised patterns of behavior and operational processes (Evidence-statement#4: Strong).

In general terms, facilitating features of an intervention are beneficial for implementation (Evidence-statement#8: Strong). One facilitating feature is intervention intensity (Evidence-statement#14: Initial). Time-limited interventions are not necessarily less effective than more extensive interventions (Evidence-statement#6b: Promising). Interventions that introduce conflict between the tasks that service delivery staff must also perform can undermine some of the facilitating characteristics of recipients (e.g., motivated recipients, Evidence-statement#9b: Promising). Interventions that require little or no contact or co-ordination with employing organizations are unlikely to be affected by senior managers' hindering behavior or attitudes in employing organizations (Evidence-statement#12: Strong).

For employability and health providers, experts with a strategic oversight of healthcare and/or vocational rehabilitation (e.g. senior managers in service delivery organizations, occupational physicians) and service delivery professionals (e.g. vocational counsellors) can facilitate implementation of effective interventions, yet other factors may undermine this facilitation (Evidence-statement#8: Strong; Evidence-statement#13a: Strong). Physicians and service providers might be particularly problematic in terms of hindering factors (Evidence-statement#13b: Initial). This may include physicians who are skeptical about vocationally-focused health interventions, who lack the motivation or time to engage. Conflicts between service delivery organizations can be hindering if multiple suppliers are engaged.

In relation to organizational stakeholders, intervention recipients can hinder or facilitate implementation. Facilitating factors include motivation to engage with an intervention and hindering factors include symptom severity (Evidence-statement#9c: Initial). However, recipient-related hindering factors can be overcome and facilitating factors are not necessary and sufficient conditions for implementation of effective health and employability interventions (Evidence-statement#9a: Strong). Facilitating factors can be undermined by other factors related to, for example, the tasks of service delivery staff (Evidence-statement#9b: Promising). Line managers may have a detrimental effect on health and employability interventions if they are not motivated to engage with the intervention, have a lack of relevant knowledge, or do not feel confident (Evidence-statement#11: Promising). However, excepting interventions that require little or no contact or co-ordination with employing organizations (Evidence-statement#12: Strong), the role of senior managers remains unclear.

In relation to the wider organizational environment, proactive employment or rehabilitation legislation that encourages employers to engage in return-to-work activities can help (Evidence-statement#1b: Promising). However, interventions can be successful in the absence of such legislative encouragement (Evidence-statement#1a: Strong) and/or where the wider organizational environment is not conducive (Evidence-statement#2: Strong). However external factors, such as adverse labour market conditions, can limit the nature of the jobs available to returning workers (Evidence-statement#1a: Strong).

Figure 2 shows that some level of implementation is necessary to realize employment and health outcomes (Baseline evidence-statement). Further, to realize performance benefits, interventions need to be of at least moderate intensity (Evidence-statement#14: Initial).

3.2. Synthesis: Key principles

Focusing just on strong or promising evidence around the implementation factors, the major findings can be condensed into six categories of implementation factors. These are as follows:

- Factors in the policy context, relating to a) external labour market conditions and b) legislation and guidance to encourage employers and healthcare professionals to engage with employability and health initiatives. For example, legislation requiring employers to engage in return-to-work meetings and return-to-work planning. (Evidence-statement#1a: Strong; Evidence-statement#1b: Promising).
- Factors related to dispositions of stakeholders, including those targeted by the initiative and line managers. These include the proactivity, motivation, and supportiveness of service delivery personnel and senior staff coordinating the delivery of the intervention or other employability and health services. Where interventions require minimal organizational involvement, senior management dispositions to the intervention may not affect implementation, but senior management dispositions may be relevant to implementing interventions requiring more organizational involvement. (Evidence-statement#8: Strong; Evidence-statement#9a: Strong; Evidence-statement#11: Promising: Evidence-statement#12: Strong; Evidence-statement#13a: Strong)
- Factors associated with tasks required for implementation. This relates to conflict between implementation tasks and other tasks. Mitigations might be, for example, establishing procedures to co-ordinate and communicate between health professionals responsible for treatment and vocational professionals responsible for return-to-work planning. The duration of the intervention does not influence

implementation. (Evidence-statement#6b: Promising; Evidence-statement#9b: Promising)

- Factors related to proactive governance of initiatives and co-ordination and integration of delivery personnel and services. For example, steering committees of initiatives to include representation from all stakeholders, including workers, line managers, occupational health, and human resources professionals. (Evidence-statement#5a: Strong)
- Factors related to learning procedures to collect data and act upon those data on a frequent basis, involving multiple stakeholders. For example, regular monitoring of progress of changes in return-to-work and attitudes of stakeholders post-implementation alongside regular meetings to plan and act on feedback from monitoring. (Evidence-statement#5b: Strong; Evidence-statement#6a: Promising; Evidence-statement#7: Strong)
- Factors related to procedures to overcome problems with potential resistance to the intervention. For example, involving line managers in return-to-work planning and reasonable adjustments. (Evidence-statement#2: Strong; Evidence-statement#9a: Strong; Evidence-statement#4: Strong; Evidence-statement#11: Promising)

4. Discussion

4.1. Implications for future research & practice

Areas where there is not enough evidence at present or initial evidence could be prioritized for future research. However, we believe there is a priority ordering within the areas where there is insufficient evidence. The first of these is for research to examine both factors influencing the implementation of interventions and their cost-effectiveness, and to attempt to examine relations between implementation and cost-effectiveness. This

recommendation is based simply on the importance of knowing relative costs and benefits of different courses of action in policy decisions. Further, cost-effectiveness needs to be determined over a suitable time-frame, given there might be short-term productivity losses when working whilst ill relative to working with full-health (Karanika-Murray & Biron, 2020).

We would also prioritize research on the adaptations that are made to fit interventions and organizational contexts with each other. The focal interventions in this review are concerned with workplaces, and so the context of the employing organization is an important consideration. Many best practice guidelines emphasize the need to fit health, safety, and wellbeing practices to other organizational processes and there is case study evidence that organizations do proactively manage the adaptation process (Daniels et al., 2022). For smaller scale intervention studies, qualitative process/implementation evaluation may provide data that could be synthesized in future reviews. However, where interventions are implemented at scale over multiple organizations, there is scope to employ quantitative data collection across multiple organizations to provide more generalizable findings, as well as sampling a sub-set of organizations for more detailed, qualitative analysis.

We would prioritize examining the role of senior managers during the implementation of interventions that require the involvement of employing organizations. Research indicates senior managers are important for intervention implementation (Daniels et al., 2021, 2022; Henstock et al., 2024), and senior managers are likely to be influential in how adaptations are made to fit interventions and organizational contexts with each other (Daniels et al., 2022). Healthcare professionals can also be powerful actors in the implementation of focal interventions of this review. Therefore, it is important to investigate the relational, structural, and other factors that may impede collaboration between healthcare professionals, other healthcare professionals, and other professionals (e.g., Stratil et al., 2017).

During data extraction, we found some codes in our frame to be more extensively populated with data than others. In these circumstances, we are unsure whether missing data for a code from a particular study meant there was no evidence that the associated factor had any influence on implementation or whether the research team did not look for evidence that the factor was or was not influential. Therefore, we would recommend researchers use explicit and extensive coding frames, such as the one developed for this review, to guide data collection on implementation and to make explicit statements of whether data were found relating to the code or not. It is particularly pertinent to code in relation to the mechanisms that link an intervention to outcomes. For example, in one study in this review (Rebergen et al., 2010), the pattern of data could be interpreted that where service delivery professionals had higher expectation of better worker outcomes, better worker outcomes were achieved. Exploring such mechanisms is again important, because discovering non-hypothesized mechanisms can lead to new and potential more cost-effective interventions.

Our review focused on comparing implementation factors for effective interventions with non-effective interventions. The review encompassed a range of health conditions, intervention types and study designs, potentially providing generalizable conclusions across a range of intervention and conditions. Even so, our conclusions are limited to the contexts, conditions, and interventions included in the review. Further, for specific combinations of interventions and conditions, more fine-grained analysis may be warranted.

Some evidence-statements were supported by studies with stronger effectiveness and/or process evaluations. To some extent, heterogeneity in study designs is captured in the evidence gradings. Further, where intervention features or the nature of health conditions affected the relationship between implementation and effectiveness, these were noted in the evidence-statements (#8,9b,9c,12,13a,13b). However, it remains possible, that intervention

features or symptoms can interact with implementation, such as sequencing of actions within interventions.

Where there is much greater homogeneity of outcome data than in this review, it might be possible for future reviews to arrange interventions of a continuum of effectiveness to enable comparisons between, for example, implementation factors that differentiate very effective interventions from slightly effective as well as non-effective interventions. Within single studies, where there are several sites, it might be possible to compare implementation across sites where the intervention varied in effectiveness.

We rated some evidence-statements as 'strong' or 'promising' and grouped these into six overarching categories of implementation factors. These overarching categories could be used to inform the design of interventions and program theories for specific interventions. Further, these categories could be integrated with implementation frameworks for complex health interventions (e.g., Damschroder et al., 2022) and with models of organizational change to develop comprehensive implementation models for occupational health interventions. The overarching categories could also be used to inform the development of guidance on intervention implementation for employers and service providers.

5. Conclusions

We have focused on the implementation of interventions designed to enhance the employability of individuals with a range of health conditions. We developed a theory of change relating implementation factors to intervention implementation and effectiveness. We found a range of factors are related to the implementation and effectiveness of such interventions. These interventions are related to the employing organization's environment, implementation management, intervention features, and a range of stakeholders. Some factors appeared to be important and necessary for implementation and/or effectiveness. Examples

include: Learning structures and activities appear necessary for implementation; intervention recipients' motivation can affect intervention effectiveness; occupational physicians and service provider organizations can adversely affect implementation and effectiveness. However, in most cases, the existence of facilitating factors for an intervention does not guarantee intervention implementation or effectiveness and hindering factors can be overcome. The overall pattern of findings could indicate that in many cases, the probability of implementation and effectiveness of employability interventions is a function of the ratio of facilitating to hindering factors. However, the overall pattern could also indicate that in many cases the presence of hindering factors need not affect intervention implementation and/or effectiveness.

References

* Included in the systematic review

*Aanesen, F., Grotle, M., Rysstad, T.L., Tveter, A.T., Tingulstad, A., Løchting, I.,… Øiestad, B.E. (2022). Effectiveness of adding motivational interviewing or a stratified vocational advice intervention to usual case management on return to work for people with musculoskeletal disorders: The MI-NAV randomised controlled trial. *Occupational and Environmental Medicine*, *80*(1), 42–50. https://doi.org/10.1136/oemed-2022-108637

*Aanesen, F., Oiestad, B.E., Grotle, M., Lochting, I., Solli, R., Sowden, G.,… Eik, H. (2022). Implementing a stratified vocational advice intervention for people on sick leave with musculoskeletal disorders: a multimethod process evaluation. *Journal of Occupational Rehabilitation*, *32*(2), 306–318. https://doi.org/10.1007/s10926-021-10007-6

*Aasdahl, L., Standal, M.I., Hagen, R., Solbjør, M., Bagøien, G., Fossen, H.,… Fors, E.A. (2023). Effectiveness of "motivational interviewing" on sick leave: a randomized controlled trial in a social insurance setting. *Scandinavian Journal of Work, Environment and Health*, *49*(7), 477–486. https://doi.org/10.5271/sjweh.4117

*Adab, P., Jordan, R.E., Fitzmaurice, D., Ayres, J.G., Cheng, K.K., Cooper, B.G.,… Turner, A. (2021). Case-finding and improving patient outcomes for chronic obstructive pulmonary disease in primary care: the BLISS research programme including cluster RCT. *Programme Grants for Applied Research*, *9*(13). https://doi.org/10.3310/PGFAR09130

*Andersén, Å., Larsson, K., Lytsy, P., Berglund, E., Kristiansson, P., & Anderzén, I. (2018). Strengthened general self-efficacy with multidisciplinary vocational rehabilitation in women on long-term sick leave: A randomized controlled trial. *Journal of Occupational Rehabilitation*, *28*(4), 691–700. https://doi.org/10.1007/s10926-017-9752-8

*Arends, I., Bultmann, U., Nielsen, K., van Rhenen, W., de Boer, M.R., & van der Klink, J.J.L. (2014). Process evaluation of a problem solving intervention to prevent recurrent sickness absence in workers with common mental disorders. *Social Science & Medicine*, *100*, 123–132. https://doi.org/10.1016/j.socscimed.2013.10.041

*Arends, I., Bültmann, U., van Rhenen, W., Groen, H., & van der Klink, J.J.L. (2013). Economic evaluation of a problem solving intervention to prevent recurrent sickness absence in workers with common mental disorders. *PLoS ONE*, *8*(8), 1–10. https://doi.org/10.1371/journal.pone.0071937

*Arends, I., Van Der Klink, J.J.L., Van Rhenen, W., De Boer, M.R., & Bültmann, U. (2014). Prevention of recurrent sickness absence in workers with common mental disorders: Results of a cluster-randomised controlled trial. *Occupational and Environmental Medicine*, *71*(1), 21–29. https://doi.org/10.1136/oemed-2013-101412

*Aust, B., Helverskov, T., Nielsen, M.B.D., Bjorner, J.B., Rugulies, R., Nielsen, K.,…Poulsen, O.M. (2012). The Danish national return-to-work program - aims, content, and design of the process and effect evaluation. *Scandinavian Journal of Work, Environment and Health*, *38*(2), 120–133. https://doi.org/10.5271/sjweh.3272

*Aust, B., Nielsen, B.D., Grundtvig, G., Buchardt, H.L., Ferm, L., Andersen, I.,…November, N. (2015). Norwegian National Institute of Implementation of the Danish return-to-work program: process evaluation of a trial in 21 Danish municipalities. *Scandinavian Journal of Work, Environment & Health*, *41*(May), 529–541. https://doi.org/10.5271/sjweh.3528

*Bal, M.I., Hilberink, S.R., Roelofs, P.P.D.M., van der Slot, W.M.A., Bentvelsen, L., Miedema, H.S., & Roebroeck, M.E. (2023). Effect evaluation of a vocational rehabilitation program for young adults with chronic physical conditions at risk for unemployment: A controlled clinical trial. *Scandinavian Journal of Occupational Therapy*, *30*(8), 1292–1302. https://doi.org/10.1080/11038128.2023.2228019

*Bal, M.I., Sattoe, J.N.T., van Schaardenburgh, N.R., Floothuis, M.C.S.G., Roebroeck, M.E., & Miedema, H.S. (2017). A vocational rehabilitation intervention for young adults with physical disabilities: participants' perception of beneficial attributes. *Child: Care, Health and Development*, *43*(1), 114–125. https://doi.org/10.1111/cch.12407

*Bejerholm, U., Areberg, C., Hofgren, C., Sandlund, M., & Rinaldi, M. (2015). Individual Placement and Support in Sweden-A randomized controlled trial. *Nordic Journal of Psychiatry*, *69*(1), 57–66. https://doi.org/10.3109/08039488.2014.929739

*Berglund, E., Anderzén, I., Andersén, Å., Carlsson, L., Gustavsson, C., Wallman, T., & Lytsy, P. (2018). Multidisciplinary intervention and acceptance and commitment therapy for return-to-work and increased employability among patients with mental illness and/or chronic pain: A randomized controlled trial. *International Journal of Environmental Research and Public Health*, *15*(11). https://doi.org/10.3390/ijerph15112424

Bickenbach, J. (2020). A human rights perspective on work participation. In U.Bültmann & J.Siegrist (Ed.s). *Handbook of Disability, Work and Health*, 331-345. New York: Springer Nature.

*Blajeski, S., Smith, M.J., Harrington, M., Johnson, J., Ross, B., Weaver, A.,…Smith, J.D. (2024). A Mixed-Methods implementation evaluation of virtual reality job interview training in IPS supported employment. *Psychiatric Services*, *75*(3), 228–236. https://doi.org/10.1176/appi.ps.20230023

*Bouwsma, E.V.A., Vonk Noordegraaf, A., Szlávik, Z., Brölmann, H.A.M., Emanuel, M.H., Lips, J. P.,…Anema, J.R. (2014). Process evaluation of a multidisciplinary care program for patients undergoing gynaecological surgery. *Journal of Occupational Rehabilitation*, *24*(3), 425–438. https://doi.org/10.1007/s10926-013-9475-4

*Bramberg, E.B., Klinga, C., Jensen, I., Busch, H., Bergstrom, G., Brommels, M., & Hansson, J. (2015). Implementation of evidence-based rehabilitation for non-specific back pain and common mental health problems: a process evaluation of a nationwide initiative. *BMC Health Services Research*, *15*, 79. https://doi.org/10.1186/s12913-015-0740-4

*Brongers, K.A., Hoekstra, T., Wilming, L., Stewart, R.E., Roelofs, P.D.D.M., & Brouwer, S. (2023). Comprehensive approach to reintegration of disability benefit recipients with multiple problems (CARm) into the labour market: results of a randomized controlled trial. *Disability and Rehabilitation*, *45*(9), 1498–1507. https://doi.org/10.1080/09638288.2022.2065543

*Brongers, K., Hoekstra, T., Wilming, L., Roelofs, P., & Brouwer, S. (2024). Process evaluation of a comprehensive approach to reintegration of disability benefit recipients with multiple problems (CARm) into the labour market. *Disability and Rehabilitation*, *46*(18), 4157–4167. https://doi.org/10.1080/09638288.2023.2264765

*Burton, W., Wayne, P. M., Litrownik, D., Long, C.R., Vining, R., Rist, P.,…Kowalski, M. H. (2024). Integrating chiropractic care and tai chi training for the treatment of chronic

nonspecific neck pain in nurses: a single-arm mixed-methods pilot trial. *Journal of Integrative and Complementary Medicine*. https://doi.org/10.1089/jicm.2024.0043

*Busch, H., Björk Brämberg, E., Hagberg, J., Bodin, L., & Jensen, I. (2018). The effects of multimodal rehabilitation on pain-related sickness absence–an observational study. *Disability and Rehabilitation*, *40*(14), 1646–1653. https://doi.org/10.1080/09638288.2017.1305456

*Carolan, S., & De Visser, R.O. (2018). Employees' perspectives on the facilitators and barriers to engaging with digital mental health interventions in the workplace: Qualitative study. *JMIR Mental Health*, *5*(1), 1–13. https://doi.org/10.2196/mental.9146

*Carolan, S., Harris, P.R., Greenwood, K., & Cavanagh, K. (2017). Increasing engagement with an occupational digital stress management program through the use of an online facilitated discussion group: Results of a pilot randomized controlled trial. *Internet Interventions*, *10*(August), 1–11. https://doi.org/10.1016/j.invent.2017.08.001

*Cashin, A.G., Øiestad, B.E., Aanesen, F., Storheim, K., Tingulstad, A., Rysstad, T.L., … Grotle, M. (2023). Mechanisms of vocational interventions for return to work from musculoskeletal conditions: a mediation analysis of the MI-NAV trial. *Occupational and Environmental Medicine*, *80*(5), 246–253. https://doi.org/10.1136/oemed-2022-108716

*Choi, K.-E.A., Lindert, L., Schlomann, L., Samel, C., Hellmich, M., & Pfaff, H. (2021). A cross-provider healthcare management program for musculoskeletal disorders: results of a randomized controlled trial in 22 German companies. *International Journal of Environmental Research and Public Health*, *18*(22). https://doi.org/10.3390/ijerph182211844

Clayton, S., Barr, B., Nylen, L., Burström, B., Thielen, K., Diderichsen, F.,...Whitehead, M. (2012). Effectiveness of return-to-work interventions for disabled people: a systematic review of government initiatives focused on changing the behaviour of employers. *The European Journal of Public Health*, *22*(3), 434-439. https://doi.org/10.1093/eurpub/ckr101

*Cotner, B.A., Njoh, E.N., Trainor, J.K., O'Connor, D.R., Barnett, S.D., & Ottomanelli, L. (2015). Facilitators and barriers to employment among veterans with spinal cord injury receiving 12 months of evidence-based supported employment services. *Topics in Spinal Cord Injury Rehabilitation*, *21*(1), 20–30. https://doi.org/10.1310/sci2101-20

*Cotner, B.A., Ottomanelli, L., O'Connor, D.R., & Trainor, J.K. (2018). Provider-identified barriers and facilitators to implementing a supported employment program in spinal cord injury. *Disability and Rehabilitation*, *40*(11), 1273–1279. https://doi.org/10.1080/09638288.2017.1294209

Damschroder, L. J., Reardon, C. M., Widerquist, M. A. O., & Lowery, J. (2022). The updated Consolidated Framework for Implementation Research based on user feedback. *Implementation science, 17(1)*, 75. https://doi.org/10.1186/s13012-022-01245-0

Daniels, K., Watson, D., Nayani, R., Tregaskis, O. (2022). *Achieving Sustainable Workplace Wellbeing*. Dordrecht: Springer Nature.

Daniels, K., Watson, D., Nayani, R., Tregaskis, O., Hogg, M., Etuknwa, A., & Semkina, A. (2021). Implementing practices focused on workplace health and psychological wellbeing: A systematic review. *Social Science & Medicine*, *277*, 113888. https://doi.org/10.1016/j.socscimed.2021.113888

Derbyshire, D.W., Jeanes, E., Morasae, E.K., Reh, S., & Rogers, M. (2024). Employer-focused interventions targeting disability employment: A systematic review. *Social Science & Medicine,* 116742. https://doi.org/10.1016/j.socscimed.2024.116742

Egan, M., Bambra, C., Petticrew, M., & Whitehead, M. (2009). Reviewing evidence on complex 31 social interventions: appraising implementation in systematic reviews of the health effects of organizational-level workplace interventions. *Journal of Epidemiology & Community Health 63*, 4-11. https://doi.org/10.1136/jech.2007.071233

Etuknwa, A., Daniels, K., & Eib, C. (2019). Sustainable return to work: a systematic review focusing on personal and social factors. *Journal of Occupational Rehabilitation, 29*, 679-700. https://doi.org/10.1007/s10926-019-09832-7

*Ferguson, K.M. (2013). Using the social enterprise intervention (SEI) and individual placement and support (IPS) models to improve employment and clinical outcomes of homeless youth with mental illness. *Social Work in Mental Health*, *11*(5), 473–495. https://doi.org/10.1080/15332985.2013.764960

*Finnes, A., Anderzén, I., Pingel, R., Dahl, J., Molin, L., & Lytsy, P. (2021). Comparing the efficacy of multidisciplinary assessment and treatment, or acceptance and commitment therapy, with treatment as usual on health outcomes in women on long-term sick leave—a randomized controlled trial. *International Journal of Environmental Research and Public Health*, *18*(4), 1–14. https://doi.org/10.3390/ijerph18041754

*Foldal, V.S., Solbjør, M., Standal, M.I., Fors, E.A., Hagen, R., Bagøien, G.,…Aasdahl, L. (2021). Barriers and facilitators for implementing motivational interviewing as a return to work intervention in a Norwegian social insurance setting: a mixed methods process evaluation. *Journal of Occupational Rehabilitation*, *31*(4), 785–795. https://doi.org/10.1007/s10926-021-09964-9

*Foldal, V.S., Standal, M.I., Aasdahl, L., Hagen, R., Bagøien, G., Fors, E.A.,…Solbjør, M. (2020). Sick-listed workers' experiences with motivational interviewing in the return to work process: A qualitative interview study. *BMC Public Health, 20*(1), 1–10. https://doi.org/10.1186/s12889-020-8382-9

*Geerdink, E.O., Huysmans, M.A., van Kempen, H., Maarleveld, J.M., van Weeghel, J., & Anema, J.R. (2024). Process evaluation of individual placement and support and participatory workplace intervention to increase the sustainable work participation of people with work disabilities. *Journal of Occupational Rehabilitation*. https://doi.org/10.1007/s10926-024-10214-x

*Geraedts, A.S., Kleiboer, A.M., Twisk, J., Wiezer, N.M., Van Mechelen, W., & Cuijpers, P. (2014). Long-term results of a web-based guided self-help intervention for employees with depressive symptoms: Randomized controlled trial. *Journal of Medical Internet Research*, *16*(7). https://doi.org/10.2196/jmir.3539

*Geraedts, A.S., Kleiboer, A.M., Wiezer, N.M., Cuijpers, P., van Mechelen, W., & Anema, J. R. (2014). Feasibility of a worker-directed web-based intervention for employees with depressive symptoms. *Internet Interventions*, *1*(3), 132–140. https://doi.org/10.1016/j.invent.2014.07.001

*Geraedts, A.S., Kleiboer, A.M., Wiezer, N.M., Van Mechelen, W., & Cuijpers, P. (2014). Short-term effects of a web-based guided self-help intervention for employees with depressive symptoms: Randomized controlled trial. *Journal of Medical Internet Research*, *16*(5). https://doi.org/10.2196/jmir.3185

*Geraedts, A.S., Van Dongen, J.M., Kleiboer, A.M., Wiezer, N.M., Van Mechelen, W., Cuijpers, P., & Bosmans, J.E. (2015). Economic evaluation of a web-based guided self-help intervention for employees with depressive symptoms: Results of a randomized controlled trial. *Journal of Occupational and Environmental Medicine, 57*(6), 666–675. https://doi.org/10.1097/JOM.0000000000000423

*Gussenhoven, A.H.M., Anema, J.R., Witte, B.I., Goverts, S.T., & Kramer, S.E. (2017). The effectiveness of a vocational enablement protocol for employees with hearing difficulties: Results of a randomized controlled trial. *Trends in Hearing, 21*, 1–12. https://doi.org/10.1177/2331216517692304

*Gussenhoven, A.H.M., Singh, A.S., Goverts, S.T., van Til, M., Anema, J.R., & Kramer, S.E. (2015). A process evaluation of implementing a vocational enablement protocol for employees with hearing difficulties in clinical practice. *International Journal of Audiology, 54*(8), 507–517. https://doi.org/10.3109/14992027.2015.1009642

*Hasson, H., Andersson, M., & Bejerholm, U. (2011). Barriers in implementation of evidence-based practice: Supported employment in Swedish context. *Journal of Health Organization and Management*, *25*(3), 332–345. https://doi.org/10.1108/14777261111143563

*Henderson, P., Quasim, T., Shaw, M., MacTavish, P., Devine, H., Daniel, M.,…McPeake, J. (2023). Evaluation of a health and social care program to improve outcomes following critical illness: a multicenter study. *Thorax, 78*(2), 160–168. https://doi.org/10.1136/thoraxjnl-2021-218428

Henstock, L., Johnson, R., Kinghorn, P., Beach, D., & Al-Janabi, H. (2024). Why and how do workplaces invest in mental health and wellbeing? A systematic review and process tracing study. *Social Science & Medicine*, 117633. https://doi.org/10.1016/j.socscimed.2024.117633

Herrera-Sánchez, I.M., León-Pérez, J.M., & León-Rubio, J.M. (2017). Steps to ensure a successful implementation of occupational health and safety interventions at an organizational level. *Frontiers in Psychology, 8*, 2135. https://doi.org/10.3389/fpsyg.2017.02135

*Hilarión, P., Koatz, D., Bonet, P., Cid, J., Pinar, I., Otín, J.M.,…Suñol, R. (2020). Implementation of the individual placement and support pilot program in Spain. *Psychiatric Rehabilitation Journal*, *43*(1), 65–71. Retrieved from http://dx.doi.org/10.1037/prj0000398

*Hoefsmit, N., Boumans, N., Houkes, I., & Nijhuis, F. (2016). A process evaluation of a return-to-work intervention to improve Cooperation between Sick-listed employees and their Supervisors (COSS). *Work, 55*(3), 593–603. https://doi.org/10.3233/WOR-162431

*Hoefsmit, N., Houkes, I., Boumans, N., Noben, C., Winkens, B., & Nijhuis, F.J.N. (2016). The effectiveness of an intervention to enhance cooperation between sick-listed employees and their supervisors (COSS). *Journal of Occupational Rehabilitation, 26*(2), 229–236. https://doi.org/10.1007/s10926-015-9606-1

*Janssens, K.M.E., Geraerds, S.J.L.M., Polinder, S., Weeghel, J. Van, Henderson, C., Joosen, M.C.W.,…Brouwers, E.P.M. (2024). Economic evaluation of a stigma awareness intervention on reemployment of people with mental illness: Results from a cluster randomized controlled trial. *Stigma and Health, Online Fir*. https://doi.org/https://dx.doi.org/10.1037/sah0000583

*Janssens, K.M.E., Joosen, M. C.W., Henderson, C., Bakker, M., den Hollander, W., van Weeghel, J., & Brouwers, E.P.M. (2024). Effectiveness of a stigma awareness intervention on reemployment of people with mental health issues/mental illness: a cluster randomised controlled trial. *Journal of Occupational Rehabilitation*, *34*(1), 87–99. https://doi.org/10.1007/s10926-023-10129-z

*Janssens, K.M.E., Joosen, M.C.W., Henderson, C., van Weeghel, J., & Brouwers, E.P.M. (2024). Improving work participation outcomes among unemployed people with mental health issues/mental illness: Feasibility of a stigma awareness intervention. *Journal of Occupational Rehabilitation*, *34*(2), 447–460. https://doi.org/10.1007/s10926-023-10141-3

*Johansson, U., Hellman, T., Nilsson, A.O., & Eriksson, G. (2021). The ReWork-Stroke rehabilitation program described by use of the TIDieR checklist. *Scandinavian Journal of Occupational Therapy*, *28*(5), 375–383. https://doi.org/10.1080/11038128.2020.1790654

*Johansson, U., Nilsson, A.O., Falkdal, A. H., von Koch, L., Hellman, T., & Eriksson, G. (2021). The delivery of the ReWork-Stroke program: A process evaluation. *Work*, *70*(2), 467–478. https://doi.org/10.3233/WOR-213585

*Kanera, I.M., Willems, R.A., Bolman, C.A.W., Mesters, I., Zambon, V., Gijsen, B.C., & Lechner, L. (2016). Use and appreciation of a tailored self-management eHealth intervention for early cancer survivors: process evaluation of a randomized controlled trial. *Journal of Medical Internet Research*, *18*(8), e229–e229. https://doi.org/10.2196/jmir.5975

Karanika-Murray, M., & Biron, C. (2020). The health-performance framework of presenteeism: Towards understanding an adaptive behavior. *Human Relations, 73*, 242-261. https://doi.org/10.1177/0018726719827081

*Kee, K.M., Mohamad, N.Z., Koh, P.P.W., Yeo, J.P.T., Ng, Y.S., Kam, J.C., & Asano, M. (2020). Return to work after spinal cord injury: a Singaporean pilot community-based rehabilitation program. *Spinal Cord*, *58*(10), 1096–1103. https://doi.org/10.1038/s41393-020-0459-x

*Kehn, M., & Honeycutt, T. (2020). Implementation and impacts of the Substantial Gainful Activity Project demonstration in Minnesota. *Journal of Vocational Rehabilitation*, *53*(3), 307–317. https://doi.org/10.3233/JVR-201107

*Khalifa, N., Hadfield, S., Thomson, L., Talbot, E., Bird, Y., Schneider, J., … Walker, D.M. (2020). Barriers and facilitators to the implementation of individual placement and support (IPS) for patients with offending histories in the community: The United Kingdom experience. *British Journal of Occupational Therapy*, *83*(3), 179–190. https://doi.org/10.1177/0308022619879334

*Khalifa, N., Talbot, E., Barber, S., Schneider, J., Bird, Y., Attfield, J.,…Völlm, B. (2020). A feasibility cluster randomized controlled trial of individual placement and support (IPS) for patients with offending histories. *Frontiers in Psychiatry, 10*(January), 1–12. https://doi.org/10.3389/fpsyt.2019.00952

*Khalifa, N., Talbot, E., Schneider, J., Walker, D.M., Bates, P., Bird, Y.,…Vollm, B. (2016). Individual placement and support (IPS) for patients with offending histories: the IPSOH feasibility cluster randomised trial protocol. *BMJ Open*, *6*(7), e012710–e012710. https://doi.org/10.1136/bmjopen-2016-012710

*Lacaille, D., White, M.A., Rogers, P.A., Backman, C.L., Gignac, M.A.M., & Esdaile, J.M. (2008). A proof-of-concept study of the "Employment and Arthritis: Making It Work" program. *Arthritis and Rheumatism, 59*(11), 1647–1655. https://doi.org/10.1002/art.24197

*Lamble, M., Seto, V., Ye, Z., Couture, C., de Oliveira, A., Calva, V.,…Nedelec, B. (2019). Perceived value of a knowledge translation intervention designed to facilitate burn survivors' work reintegration. *Journal of Burn Care & Research, 40*(6), 846–856. https://doi.org/10.1093/jbcr/irz100

*Lammerts, L., Schaafsma, F.G., van Mechelen, W., & Anema, J.R. (2016). Execution of a participatory supportive return to work program within the Dutch social security sector: a qualitative evaluation of stakeholders' perceptions. *BMC Public Health, 16*, 323. https://doi.org/10.1186/s12889-016-2997-x

*Lammerts, L., Schaafsma, F.G., van Mechelen, W., & Anema, J.R. (2017). Process evaluation of a participatory supportive return to work program for workers without a permanent employment contract, sick-listed due to a common mental disorder. *Journal of Occupational Rehabilitation, 27*(2), 159–172. https://doi.org/10.1007/s10926-016-9625-6

*Lammerts, L., Van Dongen, J.M., Schaafsma, F.G., Van Mechelen, W., & Anema, J.R. (2017). A participatory supportive return to work program for workers without an employment contract, sick-listed due to a common mental disorder: An economic evaluation alongside a randomized controlled trial. *BMC Public Health, 17*(1), 1–13. https://doi.org/10.1186/s12889-017-4079-0

*Larsson, K., Hurtigh, A.L., Andersén, Å.M.V, & Anderzén, I. (2021). Vocational rehabilitation professionals' perceptions of facilitators and barriers to return to work: A qualitative descriptive study. *Rehabilitation Counseling Bulletin*. https://doi.org/10.1177/00343552211060013

Lawson, A., & Beckett, A.E. (2021). The social and human rights models of disability: towards a complementarity thesis. *The International Journal of Human Rights*, *25*(2), 348-379. https://doi.org/10.1080/13642987.2020.1783533

*Lehmann, B.A., Lindert, L., Ohlmeier, S., Schlomann, L., Pfaff, H., & Choi, K.E. (2020). "And then he got into the wrong group": a qualitative study exploring the effects of randomization in recruitment to a randomized controlled trial. *International Journal of Environmental Research and Public Health, 17*(6). https://doi.org/10.3390/ijerph17061886

*Lepage, J., Ottomanelli, L., Barnett, S.D., & Njoh, E.N. (2014). Spinal cord injury combined with felony history: Effect on supported employment for Veterans. *Journal of Rehabilitation Research and Development, 51*(10), 1497–1504. http://dx.doi.org/10.1682/JRRD.2014.02.0045

*Løchting, I., Hagen, R., Monsen, C.K., Grotle, M., Storheim, K., Aanesen, F.,…Bagøien, G. (2021). Fidelity of a motivational interviewing intervention for improving return to work for people with musculoskeletal disorders. *International Journal of Environmental Research and Public Health, 18*(19), 1–11. https://doi.org/10.3390/ijerph181910324

*Lokman, S., Volker, D., Zijlstra-Vlasveld, M.C., Brouwers, E.P., Boon, B., Beekman, A.T.…Van Der Feltz-Cornelis, C.M. (2017). Return-to-work intervention versus usual care for sick-listed employees: Health-economic investment appraisal alongside a cluster randomised trial. *BMJ Open, 7*(10). https://doi.org/10.1136/bmjopen-2017-016348

*Lytsy, P., Carlsson, L., & Anderzén, I. (2017). Effectiveness of two vocational rehabilitation programs in women with long-term sick leave due to pain syndrome or mental illness: 1-Year follow-up of a randomized controlled trial. *Journal of Rehabilitation Medicine*, *49*(2), 170–177. https://doi.org/10.2340/16501977-2188

*Magnavita, N., Di Prinzio, R.R., Meraglia, I., Vacca, M.E., Arnesano, G., Merella, M., … Terribile, D.A. (2023). Supporting return to work after breast cancer: a mixed method study. *Healthcare*, *11*(16). https://doi.org/10.3390/healthcare11162343

*Magnavita, N., Meraglia, I., & Terribile, D.A. (2024). Returning to work after breast cancer: A one-year mixed-methods study. *International Journal of Environmental Research and Public Health*, *21*(8). https://doi.org/10.3390/ijerph21081057

*Martin, F., & Sevak, P. (2020). Implementation and impacts of the Substantial Gainful Activity Project demonstration in Kentucky. *Journal of Vocational Rehabilitation*, *53*(3), 297–305. https://doi.org/10.3233/JVR-201106

*Martin, M.H.T., Moefelt, L., Dahl Nielsen, M.B., & Rugulies, R. (2015). Barriers and facilitators for implementation of a return-to-work intervention for sickness absence beneficiaries with mental health problems: Results from three Danish municipalities. *Scandinavian Journal of Public Health*, *43*(4), 423–431. https://doi.org/10.1177/1403494814568484

*Martin, M.H.T., Nielsen, M.B.D., Madsen, I.E.H., Petersen, S.M.A., Lange, T., & Rugulies, R. (2013). Effectiveness of a coordinated and tailored return-to-work intervention for sickness absence beneficiaries with mental health problems. *Journal of Occupational Rehabilitation*, *23*(4), 621–630. https://doi.org/10.1007/s10926-013-9421-5

*Martin, M.H.T., Nielsen, M.B.D., Pedersen, J., & Rugulies, R. (2015). Stability of return to work after a coordinated and tailored intervention for sickness absence compensation beneficiaries with mental health problems: Results of a two-year follow-up study. *Disability and Rehabilitation*, *37*(22), 2107–2113. https://doi.org/10.3109/09638288.2014.1001524

*Martin, M.H.T., Nielsen, M.B.D., Petersen, S.M.A., Jakobsen, L.M., & Rugulies, R. (2012). Implementation of a coordinated and tailored return-to-work intervention for employees with mental health problems. *Journal of Occupational Rehabilitation*, *22*(3), 427–436. https://doi.org/10.1007/s10926-011-9352-y

*Meijer, E.M., Sluiter, J.K., Heyma, A., Sadiraj, K., & Frings-Dresen, M.H.W. (2006). Cost-effectiveness of multidisciplinary treatment in sick-listed patients with upper extremity musculoskeletal disorders: A randomized, controlled trial with one-year follow-up. *International Archives of Occupational and Environmental Health*, *79*(8), 654–664. https://doi.org/10.1007/s00420-006-0098-3

Metcalfe, J.D., Drake, R.E., & Bond, G.R. (2018). Economic, labor, and regulatory moderators of the effect of individual placement and support among people with severe mental illness: a systematic review and meta-analysis. *Schizophrenia Bulletin*, *44*(1), 22-31. https://doi.org/10.1093/schbul/sbx132

*Mohamad, N.B., Ng, Y.S., & Asano, M. (2024). Experiences of participating in a vocational rehabilitation program in Singapore. *Disability and Rehabilitation*, *46*(1), 139–149. https://doi.org/10.1080/09638288.2022.2159076

*Mowbray, C.T., McCrohan, N.M., & Bybee, D. (1995). Integrating vocational services into case management: Implementation analysis of project wins. *Journal of Vocational Rehabilitation, 5*(2), 89–101. https://doi.org/10.3233/JVR-1995-5204

*Mowbray, C.T., Rusilowski-Clover, G., Arnold, J., Allen, C., Harris, S., McCrohan, N., & Greenfield, A. (1994). Project WINS: Integrating vocational services on mental health case management teams. *Community Mental Health Journal, 30*(4), 347–362. https://doi.org/10.1007/BF02207488

*Mustard, C.A., Skivington, K., Lay, M., Lifshen, M., Etches, J., & Chambers, A. (2017). Implementation of a disability management policy in a large healthcare employer: a quasi-experimental, mixed-methods evaluation. *BMJ Open, 7*(6), e014734–e014734. https://doi.org/10.1136/bmjopen-2016-014734

Nevala, N., Pehkonen, I., Teittinen, A., Vesala, H.T., Pörtfors, P., & Anttila, H. (2019). The effectiveness of rehabilitation interventions on the employment and functioning of people with intellectual disabilities: A systematic review. *Journal of Occupational Rehabilitation, 29,* 773-802. https://doi.org/10.1007/s10926-019-09837-2

*Nielsen, M.B.D., Hansen, J.V., Aust, B., Tverborgvik, T., Thomsen, B.L., Bjorner, J.B.…Poulsen, O.M. (2015). A multisite randomized controlled trial on time to self-support among sickness absence beneficiaries. the Danish national return-to-work programme. *European Journal of Public Health, 25*(1), 96–102. https://doi.org/10.1093/eurpub/cku016

*Nilsson, A.Ö., Johansson, U., Ekbladh, E., Bernspång, B., Hellman, T., & Eriksson, G. (2020). Work potential and work performance during the First Try-Out of the Person-Centered Return to Work Rehabilitation Programme ReWork-Stroke: A case study. *Healthcare, 8*(4). https://doi.org/10.3390/healthcare8040454

*Noben, C., Hoefsmit, N., Evers, S., De Rijk, A., Houkes, I., & Nijhuis, F. (2015). Economic evaluation of a new organizational RTW intervention to improve cooperation between sick-listed employees and their supervisors a field study. *Journal of Occupational and Environmental Medicine, 57*(11), 1170–1177. https://doi.org/10.1097/JOM.0000000000000566

*Noben, C., van Vilsteren, M., Boot, C., Steenbeek, R., van Schaardenburg, D., Anema, J.R.…de Rijk, A. (2017). Economic evaluation of an intervention program with the aim to improve at-work productivity for workers with rheumatoid arthritis. *Journal of Occupational Health, 59*(3), 267–279. https://doi.org/10.1539/joh.16-0082-OA

*Notenbomer, A., Roelen, C., Groothoff, J., Van Rhenen, W., & Bültmann, U. (2018). Effect of an eHealth intervention to reduce sickness absence frequency among employees with frequent sickness absence: Randomized controlled trial. *Journal of Medical Internet Research, 20*(10). https://doi.org/10.2196/10821

*Öst Nilsson, A., Eriksson, G., Asaba, E., Johansson, U., & Hellman, T. (2020). Being a co-worker or a manager of a colleague returning to work after stroke: A challenge facilitated by cooperation and flexibility. *Scandinavian Journal of Occupational Therapy, 27*(3), 213–222. https://doi.org/10.1080/11038128.2018.1526318

*Öst Nilsson, A., Eriksson, G., Johansson, U., & Hellman, T. (2017). Experiences of the return to work process after stroke while participating in a person-centered rehabilitation program. *Scandinavian Journal of Occupational Therapy, 24*(5), 349–356. https://doi.org/10.1080/11038128.2016.1249404

*Ottomanelli, L., Barnett, S.D., & Goetz, L.L. (2014). Effectiveness of supported employment for veterans with spinal cord injury: 2-year results. *Archives of Physical Medicine and Rehabilitation*, *95*(4), 784–790. https://doi.org/10.1016/j.apmr.2013.11.012

*Ottomanelli, L., Barnett, S., Goetz, L., & Toscano, R. (2015). Vocational rehabilitation in spinal cord injury: What vocational service activities are associated with employment program outcome? *Topics in Spinal Cord Injury Rehabilitation*, *21*(1), 31–39. https://doi.org/10.1310/sci2101-31

*Ottomanelli, L., Goetz, L.L., Barnett, S.D., & Njoh, E. (2018). Predictors of employment outcomes among supported employment program participants with spinal cord injury. *Journal of Vocational Rehabilitation*, *49*(2), 139–148. https://doi.org/10.3233/JVR-180960

*Ottomanelli, L., Goetz, L.L., Suris, A., McGeough, C., Sinnott, P.L., Toscano, R., … Thomas, F.P. (2012). Effectiveness of supported employment for veterans with spinal cord injuries: Results from a randomized multisite study. *Archives of Physical Medicine and Rehabilitation*, *93*(5), 740–747. https://doi.org/10.1016/j.apmr.2012.01.002

*Oude Geerdink, E., Huysmans, M.A., van Kempen, H., van Weeghel, J., Motazedi, E., & Anema, J.R. (2024). Individual placement and support and participatory workplace intervention on the work participation of people with disabilities: A randomised controlled trial. *Journal of Occupational Rehabilitation*, (0123456789). https://doi.org/10.1007/s10926-024-10219-6

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D....Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *bmj*, *372*. http://dx.doi.org/10.1136/bmj.n71

*Parsons, V., Juszczyk, D., Gilworth, G., Ntani, G., McCrone, P., Hatch, S.…Madan, I. (2021). A case management occupational health model to facilitate earlier return to work of NHS staff with common mental health disorders: a feasibility study. *Health Technology Assessment*, *25*(12), 1–94. https://doi.org/10.3310/hta25120

Paterson, C., Leduc, C., Maxwell, M., Aust, B., Strachan, H., O'Connor, A....Greiner, B. A. (2024). Barriers and facilitators to implementing workplace interventions to promote mental health: qualitative evidence synthesis. *Systematic Reviews*, *13*, 152. https://doi.org/10.1186/s13643-024-02569-2

Pawson, R., & Manzano-Santaella, A. (2012). A realist diagnostic workshop. *Evaluation*, *18*, 176-191. https://doi.org/10.1177/13563890124409

*Pittam, G., Boyce, M., Secker, J., Lockett, H., & Samele, C. (2010). Employment advice in primary care: a realistic evaluation. *Health & Social Care in the Community*, *18*(6), 598–606. https://doi.org/10.1111/j.1365-2524.2010.00929

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M....Duffy, S. (2006). Guidance on the conduct of narrative synthesis in systematic reviews. *A product from the ESRC methods programme Version*, *1*(1), b92.

*Poulsen, O.M., Aust, B., Bjorner, J.B., Rugulies, R., & Jørgen, V. (2014). Effect of the Danish return-to-work program on long-term sickness absence : results from a randomized controlled trial in three municipalities. *Scandinavian Journal of Work, Environment & Health*, *40*(1), 47–56. https://doi.org/10.5271/sjweh.3383

*Radford, K., Sutton, C., Sach, T., Holmes, J., Watkins, C., Forshaw, D.…Phillips, J. (2018). Early, specialist vocational rehabilitation to facilitate return to work after traumatic brain

injury: The FRESH feasibility RCT. *Health Technology Assessment, 22*(33), 1–123. https://doi.org/10.3310/hta22330

*Rasmussen, K., & Andersen, J.H. (2005). Individual factors and GP approach as predictors for the outcome of rehabilitation among long-term sick listed cases. *Journal of Occupational Rehabilitation*, *15*(2), 227–235. https://doi.org/10.1007/s10926-005-1221-0

*Rebergen, D.S., Bruinvels, D.J., Bezemer, P.D., Van Der Beek, A.J., & Van Mechelen, W. (2009). Guideline-based care of common mental disorders by occupational physicians (CO-OP study): A randomized controlled trial. *Journal of Occupational and Environmental Medicine*, *51*(3), 305–312. https://doi.org/10.1097/JOM.0b013e3181990d32

*Rebergen, D.S., Bruinvels, D.J., Bos, C.M., Beek, A.J. Van Der, Mechelen, W. Van, & Scandinavian, S. (2010). Return to work and occupational physicians ' management of common mental health problems - process evaluation of a randomized controlled trial. *Scandinavian Journal of Work, Environment & Health, 36(6), 488-98.* https://www.jstor.org/stable/41151521

*Rebergen, D.S., Bruinvels, D.J., Van Tulder, M.W., Van Der Beek, A.J., & Van Mechelen, W. (2009). Cost-effectiveness of guideline-based care for workers with mental health problems. *Journal of Occupational and Environmental Medicine, 51*(3), 313–322. https://doi.org/10.1097/JOM.0b013e3181990d8e

Rychetnik, L., Hawe, P., Waters, E., Barratt, A., & Frommer, M. (2004). A glossary for evidence based public health. *Journal of Epidemiology & Community Health, 58(7),* 538-545. https://doi.org/10.1136/jech.2003.011585

*Rymenans, I., Vanovenberghe, C., Du Bois, M., Van den Broeck, A., & Lauwerier, E. (2024). Process evaluation of a motivational interviewing intervention in a social security setting: a qualitative study among work-disabled patients. *Journal of Occupational Rehabilitation*, *34*(1), 141–156. https://doi.org/10.1007/s10926-023-10108-4

*Schaap, R., Coenen, P., Zwinkels, W., de Wolff, M., Hazelzet, A., & Anema, J. (2024). Training for supervisors to improve sustainable employment of employees with a work disability: a longitudinal effect and process evaluation from an intervention study with matched controls. *Journal of Occupational Rehabilitation*, *34*, 180–196. https://doi.org/10.1007/s10926-023-10118-2

Schofield, D.J., Shrestha, R.N., Percival, R., Passey, M.E., Kelly, S. J., & Callander, E.J. (2011). Economic impacts of illness in older workers: quantifying the impact of illness on income, tax revenue and government spending. *BMC Public Health*, *11*, 1-7. https://doi.org/10.1186/1471-2458-11-418

*Schubin, K., Schlomann, L., Lindert, L., Pfaff, H., & Choi, K.E. (2020). Occupational physicians' perspectives on determinants of employee participation in a randomized controlled musculoskeletal health promotion measure: A qualitative study. *International Journal of Environmental Research and Public Health*, *17*(20), 1–14. https://doi.org/10.3390/ijerph17207445

*Scott, M., Falkmer, M., Falkmer, T., & Girdler, S. (2018). Evaluating the effectiveness of an autism-specific workplace tool for employers: A randomised controlled trial. *Journal of Autism and Developmental Disorders*, *48*(10), 3377–3392. https://doi.org/10.1007/s10803-018-3611-0

*Scott, M., Falkmer, M., Kuzminski, R., Falkmer, T., & Girdler, S. (2022). Process evaluation of an autism-specific workplace tool for employers. *Scandinavian Journal of Occupational Therapy*, *29*(8), 686–698. https://doi.org/10.1080/11038128.2020.1820571

Shamseer, L., Moher, D., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., et al. (2015). 2 Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 3 2015: elaboration and explanation. *British Medical Journal 349*, g7647. https://doi.org/10.1136/bmj.g7647

*Sheppard, D.M., Gargett, S., MacKenzie, A., Jull, G., Johnston, V., Strong, J.…Ellis, N. (2015). Implementing a self-management intervention for people with a chronic compensable musculoskeletal injury in a workers compensation context: a process evaluation. *Journal of Occupational Rehabilitation*, *25*, 412–422. https://doi.org/10.1007/s10926-014-9551-4

*Sherwood, K., Smith, M.J., Ross, B., Johnson, J., Harrington, M., Blajeski, S.…Smith, J.D. (2023). Mixed methods implementation evaluation of virtual interview training for transition-age autistic youth in pre-employment transition services. *Journal of Vocational Rehabilitation, 58(2),* 139-154. https://doi.org/10.3233/JVR-230004

*Sinnott, P.L., Joyce, V., Su, P., Ottomanelli, L., Goetz, L.L., & Wagner, T.H. (2014). Cost-effectiveness of supported employment for veterans with spinal cord injuries. *Archives of Physical Medicine and Rehabilitation*, *95*(7), 1254–1261. https://doi.org/10.1016/j.apmr.2014.01.010

*Skivington, K., Lifshen, M., & Mustard, C. (2016). Implementing a collaborative return-to-work program: Lessons from a qualitative study in a large Canadian healthcare organization. *Work*, *55*(3), 613–624. https://doi.org/10.3233/WOR-162437

*Smith, M.J., Sherwood, K., Ross, B., Smith, J. D., DaWalt, L., Bishop, L.…Steacy, C. (2021). Virtual interview training for autistic transition age youth: A randomized controlled feasibility and effectiveness trial. *Autism*, *25*(6), 1536–1552. https://doi.org/10.1177/1362361321989928

*Smith, M.J., Smith, J.D., Blajeski, S., Ross, B., Jordan, N., Bell, M.D.…Razzano, L.A. (2022). An RCT of virtual reality job interview training for individuals with serious mental illness in IPS supported employment. *Psychiatric Services, 73*(9), 1027–1038. https://doi.org/10.1176/appi.ps.202100516

*Smith-Morris, C., Lopez, G., Ottomanelli, L., Goetz, L., & Dixon-Lawson, K. (2014). Ethnography, fidelity, and the evidence that anthropology adds: supplementing the fidelity process in a clinical trial of supported employment. *Medical Anthropology Quarterly*, *28*(2), 141–161. https://doi.org/10.1111/maq.12093

Snape, D., Meads, C., Bagnall, A., Tregaskis, O., Mansfield, L., MacLennan, S. & Brunetti, S. (2019). *What works wellbeing: A guide to our evidence review methods*. London: What Works Centre for Wellbeing.

Snippen, N.C., de Vries, H.J., van der Burg-Vermeulen, S.J., Hagedoorn, M., & Brouwer, S. (2019). Influence of significant others on work participation of individuals with chronic diseases: a systematic review. *BMJ open*, *9*(1), e021742. https://doi.org/10.1136/bmjopen-2018-021742

*Standal, M.I., Foldal, V.S., Aasdahl, L., Fors, E.A., & Solbjør, M. (2024). Getting an outsider's perspective - sick-listed workers' experiences with early follow-up sessions in

the return to work process: a qualitative interview study. *BMC Health Services Research*, *24*(1), 1–9. https://doi.org/10.1186/s12913-024-11007-x

Stratil, J. M., Rieger, M. A., & Völter-Mahlknecht, S. (2017). Cooperation between general practitioners, occupational health physicians, and rehabilitation physicians in Germany: what are problems and barriers to cooperation? A qualitative study. *International archives of occupational and environmental health*, *90*(6), 481-490. https://doi.org/10.1007/s00420-017-1210-6

*Sutton, B.S., Ottomanelli, L., Njoh, E., Barnett, S.D., & Goetz, L.L. (2015). The impact of social support at home on health-related quality of life among veterans with spinal cord injury participating in a supported employment program. *Quality of Life Research*, *24*(7), 1741–1747. https://doi.org/10.1007/s11136-014-0912-4

*Talbot, E., Bird, Y., Russell, J., Sahota, K., Schneider, J., & Khalifa, N. (2018). Implementation of individual placement and support (IPS) into community forensic mental health settings: Lessons learned. *British Journal of Occupational Therapy*, *81*(6), 338–347. https://doi.org/10.1177/0308022618756593

*Tamminga, S.J., de Boer, A.G.E.M., Bos, M.M.E.M., Fons, G., Kitzen, J.J.E.M., Plaisier, P. W.…Frings-Dresen, M.H.W. (2012). A hospital-based work support intervention to enhance the return to work of cancer patients: a process evaluation. *Journal of Occupational Rehabilitation*, *22*(4), 565–578. https://doi.org/10.1007/s10926-012-9372-2

*Tamminga, S.J., Jansen, L.P., Frings-Dresen, M.H.W., & de Boer, A. (2020). Long-term employment status and quality of life after cancer: A longitudinal prospective cohort study from diagnosis up to and including 5 years post diagnosis. *Work*, *66*(4), 901–907. https://doi.org/10.3233/WOR-203234

*Tamminga, S.J., Verbeek, J.H.A.M., Bos, M.M.E.M., Fons, G., Kitzen, J.J.E.M., Plaisier, P. W.…de Boer, A.G.E.M. (2019). Two-year follow-up of a multi-center randomized controlled trial to study effectiveness of a hospital-based work support intervention for cancer patients. *Journal of Occupational Rehabilitation*, *29*(4), 701–710. https://doi.org/10.1007/s10926-019-09831-8

*Tamminga, S.J., Verbeek, J.H.A.M., Bos, M.M.E.M., Fons, G., Kitzen, J.J.E.M., Plaisier, P.W.…de Boer, A.G.E.M. (2013). Effectiveness of a hospital-based work support intervention for cancer patients–a multi-centre randomised controlled trial. *PLoS ONE*, *8*(5). https://doi.org/10.1371/journal.pone.0063271

*Tamminga, S.J., Verbeek, J.H.A.M., De Boer, A.G.E.M., Van Der Bij, R.M., & Frings-Dresen, M.H.W. (2013). A work-directed intervention to enhance the return to work of employees with cancer: A case study. *Work*, *46*(4), 477–485. https://doi.org/10.3233/WOR-131681

*Taylor, A.B., & Blackburn, N. (2020). "It makes me feel part of the society": Return-to-work decisions of SSDI beneficiaries. *Journal of Vocational Rehabilitation*, *53*, 319–333. https://doi.org/10.3233/JVR-201108

*Tingulstad, A., Maas, E.T., Rysstad, T., Øiestad, B.E., Aanesen, F., Pripp, A.H.…Grotle, M. (2023). Six-month cost-effectiveness of adding motivational interviewing or a stratified vocational advice intervention to usual case management for workers with musculoskeletal disorders: the MI-NAV economic evaluation. *Journal of Occupational Medicine and Toxicology*, *18*(1), 1–11. https://doi.org/10.1186/s12995-023-00394-2

*van Beurden, K.M., Vermeulen, S.J., Anema, J.R., & van der Beek, A.J. (2012). A participatory return-to-work program for temporary agency workers and unemployed workers sick-listed due to musculoskeletal disorders: a process evaluation alongside a randomized controlled trial. *Journal of Occupational Rehabilitation*, *22*(1), 127–140. https://doi.org/10.1007/s10926-011-9314-4

*van Duin, D., de Winter, L., Kroon, H., Veling, W., & van Weeghel, J. (2021). Effects of IPS plus cognitive remediation in early psychosis: 18-month functioning outcomes of a randomized controlled trial. *Schizophrenia Research*, *236*(September 2020), 115–122. https://doi.org/10.1016/j.schres.2021.07.025

*van Duin, D., van Wamel, A., de Winter, L., Kroon, H., Veling, W., & van Weeghel, J. (2021). Implementing evidence-based interventions to improve vocational recovery in early psychosis: a quality-improvement report. *Psychiatric Services*, *72*(10), 1168–1177. https://doi.org/10.1176/appi.ps.201900342

*van Duin, D., Winter, L. de, Kroon, H., Veling, W., & van Weeghel, J. (2023). Associations between learning principles of cognitive remediation and cognitive and vocational outcomes in early psychosis—an exploratory analysis of RCT data. *Applied Neuropsychology: Adult*, *0*(0), 1–11. https://doi.org/10.1080/23279095.2023.2199935

*van Egmond, M.P., Duijts, S.F.A., Jonker, M.A., van der Beek, A.J., & Anema, J.R. (2016). Effectiveness of a tailored return to work program for cancer survivors with job loss: results of a randomized controlled trial. *Acta Oncologica*, *55*(9–10), 1210–1219. https://doi.org/10.1080/0284186X.2016.1213417

*van Egmond, M.P., Duijts, S.F.A., Scholten, A.P.J., van der Beek, A.J., & Anema, J.R. (2016). Offering a tailored return to work program to cancer survivors with job loss: a process evaluation. *BMC Public Health*, *15*, 940. https://doi.org/10.1186/s12889-016-3592-x

*Van Erp, N.H.J., Giesen, F.B.M., Van Weeghel, J., Kroon, H., Michon, H.W.C., Becker, D.… Drake, R.E. (2007). A multisite study of implementing supported employment in the Netherlands. *Psychiatric Services*, *58*(11), 1421–1426. https://doi.org/10.1176/ps.2007.58.11.1421

*van Vilsteren, M., Boot, C.R.L., Twisk, J.W.R., Steenbeek, R., Voskuyl, A.E., van Schaardenburg, D., & Anema, J.R. (2017). One year effects of a workplace integrated care intervention for workers with rheumatoid arthritis: results of a randomized controlled trial. *Journal of Occupational Rehabilitation*, *27*, 128–136. https://doi.org/10.1007/s10926-016-9639-0

*van Vilsteren, M., Boot, C.R.L., Twisk, J.W.R., van Schaardenburg, D., Steenbeek, R., Voskuyl, A.E., & Anema, J.R. (2017). Effectiveness of an integrated care intervention on supervisor support and work functioning of workers with rheumatoid arthritis. *Disability and Rehabilitation*, *39*(4), 354–362. https://doi.org/10.3109/09638288.2016.1145257

*van Vilsteren, M., Boot, C.R.L., Voskuyl, A.E., Steenbeek, R., van Schaardenburg, D., & Anema, J.R. (2016). Process evaluation of a workplace integrated care intervention for workers with rheumatoid arthritis. *Journal of Occupational Rehabilitation*, *26*(3), 382–391. https://doi.org/10.1007/s10926-015-9624-z

*Vanovenberghe, C., Van den Broeck, A., Bois, M. Du, Schryver, M. De, & Lauwerier, E. (2023). A pilot randomized controlled trial on motivational interviewing in return to work after work disability. *Patient Education and Counseling*, *106*(1), 98–106. https://doi.org/10.1016/j.pec.2022.09.014

*Varekamp, I., Krol, B., & van Dijk, F.J.H. (2011). Empowering employees with chronic diseases: process evaluation of an intervention aimed at job retention. *International Archives of Occupational and Environmental Health*, *84*(1), 35–43. https://doi.org/10.1007/s00420-010-0577-4

*Varekamp, I., Verbeek, J.H., de Boer, A., & van Dijk, F.J.H. (2011). Effect of job maintenance training program for employees with chronic disease - a randomized controlled trial on self-efficacy, job satisfaction, and fatigue. *Scandinavian Journal of Work, Environment and Health*, *37*(4), 288–297. https://doi.org/10.5271/sjweh.3149

*Verhoef, J.A.C., Roebroeck, M.E., Van Schaardenburgh, N., Floothuis, M.C.S.G., & Miedema, H.S. (2014). Improved occupational performance of young adults with a physical disability after a vocational rehabilitation intervention. *Journal of Occupational Rehabilitation*, *24*(1), 42–51. https://doi.org/10.1007/s10926-013-9446-9

*Vermeulen, S.J., Anema, J.R., Schellart, A.J.M., Knol, D.L., Van Mechelen, W., & Van Der Beek, A.J. (2011). A participatory return-to-work intervention for temporary agency workers and unemployed workers sick-listed due to musculoskeletal disorders: Results of a randomized controlled trial. *Journal of Occupational Rehabilitation*, *21*(3), 313–324. https://doi.org/10.1007/s10926-011-9291-7

*Volker, D., Zijlstra-Vlasveld, M.C., Anema, J.R., Beekman, A.T., Brouwers, E.P.M., Emons, W.H.…Feltz-Cornelis, D. (2015). Effectiveness of a blended web-based intervention on return to work for sick-listed employees with common mental disorders: Results of a cluster randomized controlled trial. *Journal of Medical Internet Research*, *17*(5). https://doi.org/10.2196/jmir.4097

*Volker, D., Zijlstra-Vlasveld, M.C., Brouwers, E.P.M., & van der Feltz-Cornelis, C.M. (2017). Process evaluation of a blended web-based intervention on return to work for sick-listed employees with common mental health problems in the occupational health setting. *Journal of Occupational Rehabilitation*, *27*(2), 186–194. https://doi.org/10.1007/s10926-016-9643-4

*Vonk Noordegraaf, A., Anema, J.R., Van Mechelen, W., Knol, D.L., Van Baal, W.M., Van Kesteren, P.J.M.…Huirne, J.A.F. (2014). A personalized eHealth program reduces the duration until return to work after gynaecological surgery: Results of a multicenter randomised trial. *BJOG: An International Journal of Obstetrics and Gynaecology*, *121*(9), 1127–1136. https://doi.org/10.1111/1471-0528.12661

*Willems, R.A., Bolman, C.A.W., Mesters, I., Kanera, I.M., Beaulen, A.A.J.M., & Lechner, L. (2017). Short-term effectiveness of a web-based tailored intervention for cancer survivors on quality of life, anxiety, depression, and fatigue: randomized controlled trial. *Psycho-Oncology*, *26*(2), 222–230. https://doi.org/10.1002/pon.4113

*Willems, R.A., Lechner, L., Verboon, P., Mesters, I., Kanera, I.M., & Bolman, C.A.W. (2017). Working mechanisms of a web-based self-management intervention for cancer survivors: a randomised controlled trial. *Psychology and Health*, *32*(5), 605–625. https://doi.org/10.1080/08870446.2017.1293054

*Willems, R.A., Mesters, I., Lechner, L., Kanera, I.M., & Bolman, C.A.W. (2017). Long-term effectiveness and moderators of a web-based tailored intervention for cancer survivors on social and emotional functioning, depression, and fatigue: randomized controlled trial. *Journal of Cancer Survivorship*, *11*(6), 691–703. https://doi.org/10.1007/s11764-017-0625-0

Wong, J., Kallish, N., Crown, D., Capraro, P., Trierweiler, R., Wafford, Q. E....Heinemann, A.W. (2021). Job accommodations, return to work and job retention of people with physical disabilities: a systematic review. *Journal of Occupational Rehabilitation, 31*, 474-490. https://doi.org/10.1007/s10926-020-09954-3

Yarker, J., Lewis, R., Sinclair, A., Michlig, G., Munir, F. (2022). Meta-synthesis of qualitative research on the barriers and facilitators to implementing workplace mental health interventions. *Social Science & Medicine – Mental Health, 2*, 100148. https://doi.org/10.1016/j.ssmmh.2022.100148

*Zainal, M.N. Bin, Wen, P.K.P., Sien, N.Y., Kee, K.M., Chieh, K.J., & Asano, M. (2020). Supporting people with stroke to return to work in Singapore: Findings from a pilot vocational rehabilitation program. *American Journal of Occupational Therapy*, *74*(6), 1–10. https://doi.org/10.5014/ajot.2020.041376

*Zaman, A.C.G.N.M., Tytgat, K.M.A.J., Klinkenbijl, J.H.G., Boer, F.C. de., Brink, M.A., Brinkhuis, J.C.… de Boer, A.G.E.M. (2021). Effectiveness of a tailored work-related support intervention for patients diagnosed with gastrointestinal cancer: a multicenter randomized controlled trial. *Journal of Occupational Rehabilitation, 31*(2), 323–338. https://doi.org/10.1007/s10926-020-09920-z

*Zaman, A.G.N.M., Tytgat, K.M.A.J., Klinkenbijl, J.H.G., de Boer, A.G.E.M., & Frings-Dresen, M.H.W. (2020). Process evaluation of a tailored work-related support intervention for patients diagnosed with gastrointestinal cancer. *Journal of Cancer Survivorship : Research and Practice, 14*(1), 59–71. https://doi.org/10.1007/s11764-019-00797-3

*Zaman, A.G.N.M., Tytgat, K.M.A.J., Klinkenbijl, J.H.G., Frings-Dresen, M.H.W., & De Boer, A.G.E.M. (2020). Is a tailored work-related support intervention feasible in everyday clinical practice? The experience of healthcare professionals and patients with cancer. *Work*, *66*(4), 871–884. https://doi.org/10.3233/WOR-203232

Zhao, J.Y., Que, W.Q., Tang, J., Li, J.M., Su, X.Q., & Guo, Y.J. (2023). Colorectal cancer survivors' experiences of return-to-work: a meta-synthesis of qualitative studies. *European Journal of Oncology Nursing*, *63*, 102284. https://doi.org/10.1016/j.ejon.2023.102284

Table 1. Coding of studies.

Theme	Explanation
Implementation	Evidence that the intervention was implemented.
Effectiveness	Beneficial interventions provide evidence that the intervention had a beneficial effect on at least one primary or secondary outcome variable, and no adverse effects on outcome variables. Contingently beneficial interventions provide no evidence of beneficial direct and main effects on outcome variables, but evidence of effects dependent on a moderator variable or dependent on transmission through mediator variables on at least one primary or secondary outcome variable. There are no adverse effects. Non-beneficial interventions provide no evidence of beneficial effects on any primary or secondary outcome variables. Interventions with adverse effects provide evidence of adverse effects on at least one primary or secondary outcome variable, regardless of other benefits. Interventions that were terminated before commencement were also noted.
External omnibus context	External shocks (e.g., economic, policy changes) or a range of other facilitators/inhibitors external to either the implementing organization or employer, such as labour market conditions.
Internal omnibus context	Factors internal to the implementing organization or employer organization not directly related to the intervention, including shocks (e.g., mergers, large forms of change), competing priorities/logics in the organization, organizational capability/capacity (e.g., availability of financial and other resources).
Presence of other health/wellbeing interventions	On-going activities to promote health/wellbeing in the workplace (e.g., flexible working) in addition to focal intervention.
On-going proactive management around health/wellbeing	Proactive wider management of a health/wellbeing strategy, such as presence of a wellbeing steering committee, assigned responsibility for health/wellbeing and implementation of a program of implementation, who is represented in the governance structures, level of planning guiding program of activities, a wider health/wellbeing strategy.
Other significant innovation around health/wellbeing	Sector leading interventions or evaluations, evidence-based practice, engagement with research or policy bodies (e.g. adoption of ISO 45001)

Table continues.

Theme	Explanation
Organizational cultural or political activities	Changing rituals and routines for symbolic purposes (e.g., middle manager stress management training, which may serve as a signal to others); evidence of narratives relating health/return to work to organizational values; evidence of symbolic involvement of senior managers and decisions to invest effort or funds; evidence of use of power to influence the course of the intervention.
Governance of the intervention	Factors such as presence of intervention steering committee, assigned responsibility for return to work/health and intervention implementation, who is represented in the governance structures, level of planning and program theory guiding the intervention, use of evidence-based practice, embedding initiative in a wider strategy.
Sequencing of intervention activities	Planned order of events/activities (e.g., prescribed order of assessment, decision, intervention, evaluation).
Continuity, perseverance, adaptation and embedding of the intervention	Perseverance in implementation efforts, local adaptations, embedding practices into everyday activities.
Learning structures and activities	Procedures for capturing learning from implementation for adaptation and/or capacity/capability building.
Intervention or intervention provider	Features of the intervention (e.g., novelty) or people implementing discrete aspects of the intervention at an operational level (e.g., training delivery). Relates to perceptions/attitudes/expectations and behaviors including commitment, value placed on health/wellbeing, beliefs on responsibility for health/wellbeing, denial/withdrawal from intervention, diffidence about health/wellbeing, passive/active resistance to intervention, competence/capacity/ capability for implementation, passive engagement in intervention, proactive engagement in intervention.
Intervention recipients	Recipients of the intervention. Examples the same for service provider characteristics (above). Can include level of functional ability or symptom severity.

Table continues.

Theme	Explanation
Actors in recipients non-work context	Others that interact with intervention recipients outside of employments contexts (e.g. family, carers, friends). Examples the same for service provider characteristics (above).
Non-work context	Intervention recipients' context (e.g. access to transport to work).
Co-workers	Co-workers of recipients. Examples the same for service provider characteristics (above).
Line/middle managers	Immediate managers of the recipients or other managers whose day-to-day work may affect the intervention implementation. Examples the same for service provider characteristics (above).
Senior managers	Senior organizational leaders in employing organizations (CEO and other C-suite executives). Examples the same for service provider characteristics (above).
Expert/strategic implementers	Specialist functional roles with relevant expertise for implementation at a strategic/program level rather than operational level – mainly related to human resources or occupational health functions. Can relate to employer organization or implementing organization. Examples the same for service provider characteristics (above).
Grafting	Evidence that the intervention was adapted to fit with aspects of the organization (e.g. existing software, meeting structures, spaces used to deliver intervention)
Fracturing	Evidence that the organization changed to allow the intervention (e.g. attempts to change behavioral norms around absenteeism/presenteeism, introduction of new performance management or development practices around health or absenteeism)
Gestalting	Evidence that the intervention and other aspects of the organization were brought together under a single purpose (e.g. communications around the intervention linked to EDI policies)

Other contextual data captured on data extraction sheets relates to the cost-effectiveness of interventions, effects on work performance outcomes, sector, country, strength of research design and characteristics of the intervention. These factors are considered in the interpretation of evidence.

Table 2. Summary of included studies.

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Aanesen et al.,2022	Aanesen et al.,2023;Tingulstad et al.,2023;Cashin et al.,2023; Løchting et al.,2021	RCT	Treatment#1=169 Treatment#2=169 Control=171	Muscular-skeletal	Motivational interviewing; Vocational advice	Sickness absence, RTW expectancy, workability	Contingently beneficial	Partial
Adab et al.,2021	n/a	Pre-post-test	Treatment=248	Cardiovascular	Tailored assessment to recommend work modifications	Employment rates, sickness absence, presenteeism, physical health indicators	Not implemented at all	Not implemented
Arends et al.,2014a	Arends et al.,2013,2014b	Cluster RCT	Treatment=80 Control=78	Common mental illness	Problem-solving	Sickness absence, mental health complaints, work functioning, coping	Beneficial	Partial
Aust et al.,2015	Aust et al.,2012;Nielsen et al.,2015;Poulsen et al.,2014	RCT	Treatment=1388 Control=812	Non-specific	Training service delivery professionals	Time to coming off benefits	Contingently beneficial	Partial
Bal et al.,2017	Bal et al.,2023;Verhoef et al.,2014	Two studies of same intervention, pre-post-test and RCT	Pre-post=11 RCT treatment=49 RCT control=39	Non-specific physical conditions (young adults)	Guided group-based support	Paid employment, indicators of confidence and extent of engagement with work, self-efficacy, workability, quality of life	Contingently beneficial	No clear evidence
Blajeski et al.,2024	Smith et al.,2022	RCT	Treatment=54 Control=36	Severe mental illness (young adults)	Job-interview training	Employment rates, interview skills, interview anxiety, interview competence, social competence	Beneficial	Implemented
Bouwsma et al.,2014	Von Noordegraaf et al.,2014	RCT	Treatment=110 Control=105	Recovery from surgery (women)	Problem-solving/ educational	Duration of sick leave, RTW, quality of life, pain	Beneficial	Partial

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Brämberg et al.,2015	Busch et al.,2018	Observational matched control	Treatment=469 Control=469	Muscular-skeletal	Multimodal, including education	Sickness absence, receipt of disability pension	Adverse effects	Partial
Brongers et al.,2024	Brongers et al.,2023	RCT	Treatment=97 Control=110	Non-specific	Action-planning	Employment rates, psychological functioning, general health, quality of life, social support	Adverse effects	Not implemented
Buijs et al.,2009	Lambeek et al.,2009,2010	RCT	Treatment=61 Control=68	Back pain	Multimodal, including workplace modifications	Sickness absence, pain, functionality, physical complaints	Beneficial	Implemented
Burton et al.,2024	n/a	Pre-post-test	Treatment=21	Neck pain	Chiropractics and Tai-Chi	Multiple indicators of pain, general health, burnout, self-efficacy	Beneficial	Partial
Carolan & Visser, 2018†	Carolan et al.,2017	RCT	Treatment#1=28 Treatment#2=28 Control=28	Stress	Cognitive-behavioral therapy/ discussion groups	Multiple indicators of psychological distress and psychological wellbeing*	Non-beneficial	Partial
Schubin et al.,2020	Choi et al.,2021;Lehman et al.,2020	RCT	Treatment=379 Control=350	Muscular-skeletal	Case-management	Sickness absence, workability, pain, functionality, self-efficacy	Contingently beneficial	Partial
Cotner et al.,2018	Ottomanelli et al.,2018;Sutton et al.,2015	Pre-post-test	Treatment=213	Spinal cord injury	Individual placement support	Quality of life	Beneficial	No clear evidence
Cotner et al.,2015	LePage et al.,2014; Ottomanelli et al.,2012,2015; Sinnott et al.,2014;Smith-Morris et al.,2014	RCT	Treatment=81 Control#1=76 Control#2=44	Spinal cord injury	Individual placement support	Employment rates, hours worked, salary, criminal arrests, convictions	Beneficial	Implemented
Ferguson,2013	n/a	Case studies with control sites	Treatment#1=16 Treatment#2=20 Control#1=12 Control#2=16	Mental health (young adults)	Individual placement support/education	Employment rates, depression, life satisfaction, peer support, family support	Beneficial	Implemented

†Only one out of 42 comparisons between intervention and control reached statistical significance. This was likely chance occurrence given multiple tests.

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Foldal et al.,2021	Aasdahl et al.,2023;Foldal et al.,2020;Standal et al.,2024	RCT	Treatment=257 Control#1=266 Control#1=252	Non-specific	Motivational interviewing	Sickness absence, receipt of sickness benefits	Non-beneficial	Partial
Oude Geerdink et al.,2024a	Oude Geerdink et al.,2024b	RCT	Treatment#1=31 Treatment#2=30 Treatment#3=29 Control=30	Non-specific	Individual placement support/action-planning	Employment rates, social functioning, mental health, physical health, workability	Contingently beneficial	Partial
Geraedts et al.,2014b	Geraedts et al.,2014a,2015	RCT	Treatment=116 Control=115	Depression	Problem-solving/cognitive therapy	Depressive symptoms, burnout, anxiety, absence, work performance, health care utilization, quality of life	Beneficial	Partial
Gussenhoven et al.,2015	Gussenhoven et al.,2017	RCT	Treatment=68 Control=68	Hearing	Multimodal/ action-planning	Need for recovery, communication strategies for people with hearing loss, distress, self-efficacy	Non-beneficial	Partial
Hasson et al.,2011	Bejerholm et al.,2015	RCT	Treatment=60 Control=60	Severe mental illness	Individual placement support	Employment rates, duration of employment, income	Beneficial	Implemented
Henderson et al.,2023	n/a	Cohort, non-equivalent control group	Treatment=137 Control=115	Critical care survivors	Multimodal/ action-planning	Quality of life, self-efficacy, mental health, pain	Beneficial	No clear evidence
Hilarión et al.,2020	n/a	Pre-post-test	Treatment=1620	Severe mental illness	Individual placement support	Employment rates	Beneficial	Implemented
Hoefsmit et al.,2016a	Hoefsmit et al.,2016b;Noben et al.,2015	RCT	Treatment=39 Control=25	Non-specific	Action-planning	Quality of life, RTW	Non-beneficial	Partial

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Karlsson et al.,2023	Eklund et al.,2024;Karlsson et al.,2024	Cluster RCT	Treatment=81 Control=104	Common mental illness	Problem-solving/training service delivery professionals	Sickness absence, RTW, workability, work performance, psychological symptoms, general health	Adverse effects	No clear evidence
Janssens et al.,2024b	Janssens et al.,2024a,2024c	Cluster RCT	Treatment=76 Control=77	Mental illness	Educational/ problem-solving/training service delivery professionals	Employment rates, employment retention, mental health, wellbeing, perceived stigma, experienced discrimination, job search behavior, support from employment specialists	Beneficial	Partial
Johansson et al.,2021b	Johansson et al 2021a;Nilsson et al.,2020a,2020b;Öst Nilsson et al.,2017	Case study	Treatment=10	Stroke	Action-planning	Work performance, work potential, fatigue, perceived impact of stroke	Beneficial	Partial
Kanera et al.,2016	Kanera et al.,2017a,2017b;Willems et al.,2017a,2017b,2017c	RCT	Treatment=188 Control=211	Cancer	Educational/ action-planning	Global health, physical functioning, role functioning, social functioning, cognitive functioning, anxiety, depression fatigue	Contingently beneficial	Partial
Lacaille et al.,2008	n/a	Pre-post-test	Treatment=19	Arthritis	Educational/ ergonomic assessment	Disease variables, employment status risk factors for work loss, limitations at work and presenteeism	Beneficial	Implemented
Lamble et al.,2019	n/a	Pre-post-test, cross-sectional control group	Treatment=15 Control=14	Burn survivors	Educational/ advice from therapist	RTW, hours worked, salary	Contingently beneficial	Partial

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Lammerts et al.,2017a	Lammerts et al.,2016a,2016b,2017b	RCT	Treatment=94 Control=92	Common mental illness	Multimodal/ action-planning	RTW, working hours, discontinuation of benefits, psychological symptoms, health, multiple indicators of functioning	Non-beneficial	Partial
Larsson et al.,2021	Andersén et al.,2018;Berglund et al.,2018;Finnes et al.,2021;Lytsy et al.,2017	RCT	Treatment#1=178 Treatment#2=102 Control=147	Common mental illness or pain	Multidisciplinary team management/ psychological therapy	RTW, employability, anxiety, depression, wellbeing, pain, life satisfaction, self-efficacy	Beneficial	Implemented
Magnavita et al.,2024	Magnavita et al.,2023	Pre-post-test	Treatment=32	Breast cancer	Personalized advice	Workability, sleep, fatigue, organizational justice, anxiety and depression, happiness	Non-beneficial	Partial
Martin et al.,2015a	Martin et al.,2012,2013,2015b	Quasi-experimental, non-equivalent control group	Treatment=88 Control=80	Common mental illness	Action-planning	Sickness absence, RTW, somatic symptoms, workability	Adverse effects	Not implemented
Meijer et al.,2006	n/a	RCT	Treatment=23 Control=15	Muscular-skeletal	Educational/ physical activity	RTW, working hours, physical disability scores, physical functioning, kinesiophobia	Beneficial	Implemented
Mohamad et al.,2024	Bin Zainal et al.,2020;Kee et al.,2020	Qualitative study	Treatment=90	Stroke or spinal cord injury	Multimodal	RTW, community integration, independence	Beneficial	No clear evidence
Mowbray et al.,1995	Mowbray et al.,1994	Pre-post-test	Treatment=88	Non-specific	Supported employment	Employment rates, vocational activity, global functioning	Beneficial	Partial

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Mustard et al.,2017	Skivington et al.,2016	Quasi-experimental trial, non-equivalent control group	Treatment=104 (1 organization) Control=29 organizations	Non-specific	Action-planning	Compensation claims, disability duration	Non-beneficial	Implemented
Notenbomer et al.,2018	n/a	RCT	Treatment#1=21 Treatment#2=31 Control=30	Non-specific	Personalized-feedback, consultation with occupational physician	Sickness absence, burnout, engagement, workability	Non-beneficial	Not implemented
Parsons et al.,2021	n/a	Feasibility study	Treatment=11 Control=13	Common mental illness	Case management/ problem-solving	Sickness absence, workability, self-efficacy, anxiety, depression, use of medication	Non-beneficial	Partial
Pittam et al.,2010	n/a	Qualitative evaluation	Treatment=22	Mental illness	Employment advice	RTW	Contingently beneficial	Implemented
Radford et al.,2018	n/a	RCT	Treatment=39 Control=39	Brain injury	Multimodal guided by occupational therapist	RTW	Adverse effects	Implemented
Rebergen et al.,2010	Rebergen et al.,2009a,2009b	RCT	Treatment=125 Control=115	Common mental illness	Guidance for occupational physicians	RTW	Contingently beneficial	Not implemented
Rymenans et al.,2024	Vanovenberghe et al.,2023	RCT	Treatment=124 Control=131	Non-specific	Motivational interviewing	RTW, relapse, work motivation, workability, quality of life	Beneficial	Partial
Schaap et al.,2024	n/a	Matched controls	Treatment=73 Control=1526	Non-specific	Manager education	Employment rates, temporary employment, working hours, salary	Non-beneficial	No clear evidence
Sherwood et al.,2023	Smith et al.,2021	RCT	Treatment=48 Control=23	Autism (young people)	Job interview training	Employment rates, likelihood of successful job interview, job interview anxiety, job interview skills,	Beneficial	Implemented

Table continues

Primary reference	Related papers	Effectiveness design*	Effectiveness analysis sample size	Condition targeted	Intervention	Outcomes**	Effectiveness	Implementation
Tamminga et al.,2012	Tamminga et al.,2013a,2013b,2019, 2020	RCT	Treatment=65 Control=68	Cancer (women)	Education, communication between healthcare professionals	RTW, workability, work functioning, quality of life,	Non-beneficial	Partial
Taylor & Blackburn,2020	Kehn & Honeycutt, 2020;Martin & Sevak,2020	Cluster RCT	Treatment=1196 Control=1132	Non-specific	Multimodal including job placement	Employment rates, income	Contingently beneficial	Partial
van Beurden et al.,2012	Vermeulen et al.,2011	RCT	Treatment=79 Control=84	Muscular-skeletal	Facilitated action-planning/problem-solving	RTW, sickness benefits, functional status, pain, perceived health	Beneficial	Partial
van Duin et al.,2021a	van Duin et al.,2021b,2023	RCT	Treatment=34 Control=39	Severe mental illness	Individual placement support and cognitive training	Hours in employment or education, employment rates, cognitive functioning, mental health	Beneficial	Implemented
Van Egmond et al.,2016b	Van Egmond et al.,2016a	RCT	Treatment=85 Control=86	Cancer	Action-planning	RTW, fatigue, quality of life, participation in society	Non-beneficial	Partial
van Vilsteren et al.,2016	Noben et al.,2017;van Vilsteren et al.,2017a,2017b	RCT	Treatment=75 Control=75	Arthritis	Multidisciplinary healthcare and participatory ergonomics	Work instability, at work productivity loss	Non-beneficial	Partial
Varekamp et al.,2011a	Varekamp et al.,2011b	RCT	Treatment=64 Control=58	Non-specific(physical)	Education/ problem-solving	Self-efficacy, fatigue, job satisfaction, job maintenance	Beneficial	Implemented
Volker et al.,2017	Volker et al.,2015;Lokman et al.,2017	RCT	Treatment=131 Control=89	Common mental illness	Education, problem-solving, decision aid for occupational physicians	RTW	Beneficial	Partial
Zaman et al.,2020a	Zaman et al.,2020b,2021	RCT	Treatment=42 Control=46	Cancer	Training healthcare professionals	RTW, work limitations	Beneficial	Partial

* RCT=randomized control trial, **RTW=return to work

Table 3. Summary of evidence-statements

Evidence statement	Grading	Rationale for grading	Contributing studies
Baseline: The pattern of implementation against effectiveness indicates at least partial implementation is necessary to attain benefits, but implementation does not guarantee beneficial outcomes	Strong	Large number of studies, many high-quality effectiveness and/or process analysis	Aanesen,2022,Adab,2021,Arends,2014a,Aust,2015,Blajeski,2024,Bouwsma,2014, Brämberg,2015,Brongers,2024,Buijs,2009,Burton,2024,Carolan & Visser,2018, Schubin,2020,Cotner,2015, Ferguson,2013,Foldal,2021,Oude Geerdink,2024, Geraedts,2014b,Gussenhoven,2015,Hasson,2011,Hilarión,2020,Hoefsmit,2016a, Janssens,2024b,Johansson,2021b,Kanera,2016, Lacaille,2008,Lamble,2019, Lammerts,2017a,Larsson,2021,Magnavita,2024,Martin,2015a,Meijer,2006,Mowbray,1994, Mustard,2017,Notenbomer,2018,Parsons,2021,Pittam,2010, Radford,2018,Rebergen,2024, Rebergen,2010,Rymenans,2024,Sherwood,2023,Tamminga,2012,Taylor & Blackburn,2020, van Beurden,2012,van Duin,2021a,Van Egmond,2016b,van Vilsteren,2016, Varekamp,2011a,Volker,2017,Zaman,2020a
1a: Features of the legislative and economic environment not conducive to health and employability interventions can be overcome, although adverse labour market conditions may limit the quality of employment options.	Strong	22 studies, many high-quality effectiveness and/or process analysis	Aanesen,2022,Aust,2015,Brämberg,2015,Schubin,2020,Cotner,2015,Ferguson,2013,Oude Geerdink,2024,Hasson,2011,Henderson,2023,Hilarión,2020,Hoefsmit,2016a,Lamble,2019, Lammerts,2017a,Larsson,2021,Magnavita,2024,Martin,2015a,Meijer,2006,Pittam,2010, Schaap,2024,Tamminga,2012,van Duin,2021a,an Egmond,2016b
1b: Legislation can help health and employability interventions to be effective	Promising	Evidence based on studies with randomized designs, although two were underpowered and one had attrition problems. The process analyses for these studies tended to be highly structured or comprehensive in reporting.	Rymenans,2024,Sherwood,2023,Zaman,2020a
2: Features of the organizational environment not conducive to health and employability interventions can be overcome	Strong	22 studies, several well-designed and executed randomized trials and multiple well-executed process/implementation analyses	Arends,2014a,Aust,2015,Brongers,2024,Buijs,2009,Carolan & Visser,2018,Schubin,2020, Cotner,2018, Foldal,2021,Oude Geerdink,2024,Geraedts,2014b,Hoefsmit,2016a, Karlsson,2023, Johansson,2021b, Lammerts,2017a,Mowbray,1994,Mustard,2017, Radford,2018, Rebergen,2010 Rebergen,2010,Schaap,2024,van Beurden,2012,Volker,2017, Zaman,2020a
3: Difficulties integrating and coordinating multiple interventions can be overcome	Initial	Although based on 7 studies, only two appropriately powered randomized designs and only three studies with detailed and rigorous process analysis. Both appropriately powered randomized designs reported on beneficial interventions, meaning there is no rigorous counter-factual comparator.	Bal,2017,Buijs,2009,Hilarión,2020,Martin,2015a,Mowbray,1994,Tamminga,2012,van Duin, 2021a
4: Factors related to organizational cultures or politics can be overcome to implement effective interventions	Strong	Ten studies, two studies reporting benefits using appropriately powered, randomized designs and three reporting rigorous process analyses. Two studies reporting no benefits had rigorous process analyses.	Brämberg,2015,Cotner,2018,Hasson,2011,Hoefsmit,2016a,Janssens,2024b,Larsson,2021, Magnavita,2024,Martin,2015a,Mustard,2017,Radford,2018

Table continues.

Evidence statement	Grading	Rationale for grading	Contributing studies
5a: It is insufficient to establish governance structures, rather governance of interventions needs to ensure co-ordination and integration of delivery personnel and services.	Strong	Eight studies, two studies using appropriately powered, randomized designs and three reporting rigorous process analyses.	Brämberg,2015,Buijs,2009,Schubin,2020,Cotner,2018,Cotner,2015,Henderson,2023, Hilarión,2020,Mustard,2017
5b: Facilitating governance structures are associated with a) efforts at continuation and adaption of interventions and b) learning structures and activities	Strong	Eight studies, two studies using appropriately powered, randomized designs and three reporting rigorous process analyses.	Brämberg,2015,Buijs,2009,Schubin,2020,Cotner,2018,Cotner,2015,Henderson,2023, Hilarión,2020,Mustard,2017
6a: Continuity, perseverance and adaptation in implementation is most likely to realize intervention benefits if those interventions involve multiple stakeholders acting frequently and systemically across many or all of those affected by the intervention	Promising	Nineteen studies, some with appropriately powered randomized designs and/or rigorous process analyses. However, evidence-statement is based on drawing inferences from the pattern of evidence. Some studies that do not report results consistent with the evidence-statement, indicating possibility of adaptations at specific sites or for particular groups of participants.	Aanesen,2022,Blajeski,2024,Brämberg,2015,Buijs,2009,Schubin,2020,Cotner,2018, Cotner,2015,Ferguson,2013,Foldal,2021,Henderson,2023,Hilarión,2020,Hoefsmit,2016a,Karlsson,2023,Janssens,2024b,Martin,2015a,Mowbray,1994,Mustard,2017,Parsons,2021, Radford,2018
6b: Time-limited interventions are not necessarily ineffective	Promising	Five studies, two with appropriately powered, randomized designs, and only one with rich process analysis	Bouwsma,2014,Johansson,2021b,Larsson,2021,Mohamad,2024,Van Egmond,2016b
7: Positive learning structures and activities are a necessary condition for some level of intervention implementation, but not a sufficient condition for intervention success	Strong	Twelve studies, several appropriately power randomized designs and/or rigorous and rich process analysis.	Aanesen,2022,Brämberg,2015,Schubin,2020,Cotner,2018,Cotner,2015,Ferguson,2013,Oude Geerdink,2024,Hilarión,2020,Hoefsmit,2016a,Johansson,2021b,Larsson,2021,Mustard,2017
8: Facilitating features of the intervention or its provider are associated with high levels of intervention implementation and can overcome hindering features of the intervention or its provider. However, facilitating features of the intervention or provider are not necessarily associated with intervention effectiveness	Strong	Fifty-one studies, many with appropriately powered randomized designs and/or rigorous process analyses.	Adab,2021,Brämberg,2015,Burton,2024,Oude Geerdink,2024,Henderson,2023, Lammerts,2017a,Martin,2015a,Mowbray,1994,Notenbomer,2018,Aanesen,2022, Bal,2017, Brongers,2024,Buijs,2009,Carolan & Visser,2018,Cotner,2018,Cotner,2015,Foldal,2021, Hasson,2011,Hoefsmit,2016a,Karlsson,2023,Mustard,2017,Rymenans,2024,Tamminga,2012,Taylor & Blackburn,2020,van Beurden,2012,van Duin,2021a,Van Egmond,2016b,van Vilsteren,2016,Varekamp,2011a,Volker,2017,Zaman,2020a,Arends,2014a,Aust,2015, Blajeski,2024,Bouwsma,2014,Schubin,2020,Ferguson,2013,Geraedts,2014b, Gussenhoven,2015,Hilarión,2020,Janssens,2024b,Johansson,2021b,Kanera,2016, Lacaille,2008,Lamble,2019,Magnavita,2024,Mohamad,2024,Parsons,2021,Pittam,2010, Radford,2018,Sherwood,2023
9a: Hindering features of intervention recipients can be overcome, but facilitating features of intervention recipients do not guarantee intervention effectiveness	Strong	Thirty-one studies, many with appropriately powered randomized designs and/or rigorous process analyses.	Aanesen,2022,Adab,2021,Bouwsma,2014,Burton,2024,Carolan & Visser,2018,Cotner,2018, Cotner,2015,Oude Geerdink,2024,Hasson,2011,Janssens,2024b,Johansson,2021b, Lamble,2019,Lammerts,2017a,Larsson,2021,Magnavita,2024,Notenbomer,2018, Pittam,2010,van Beurden,2012,Radford,2018,Bal,2017,Blajeski,2024,Buijs,2009, Schubin,2020, Martin,2015a,Rymenans,2024,Taylor & Blackburn,2020,Ferguson,2013, Foldal,2021,Hoefsmit,2016a,Karlsson,2023,Kanera,2016

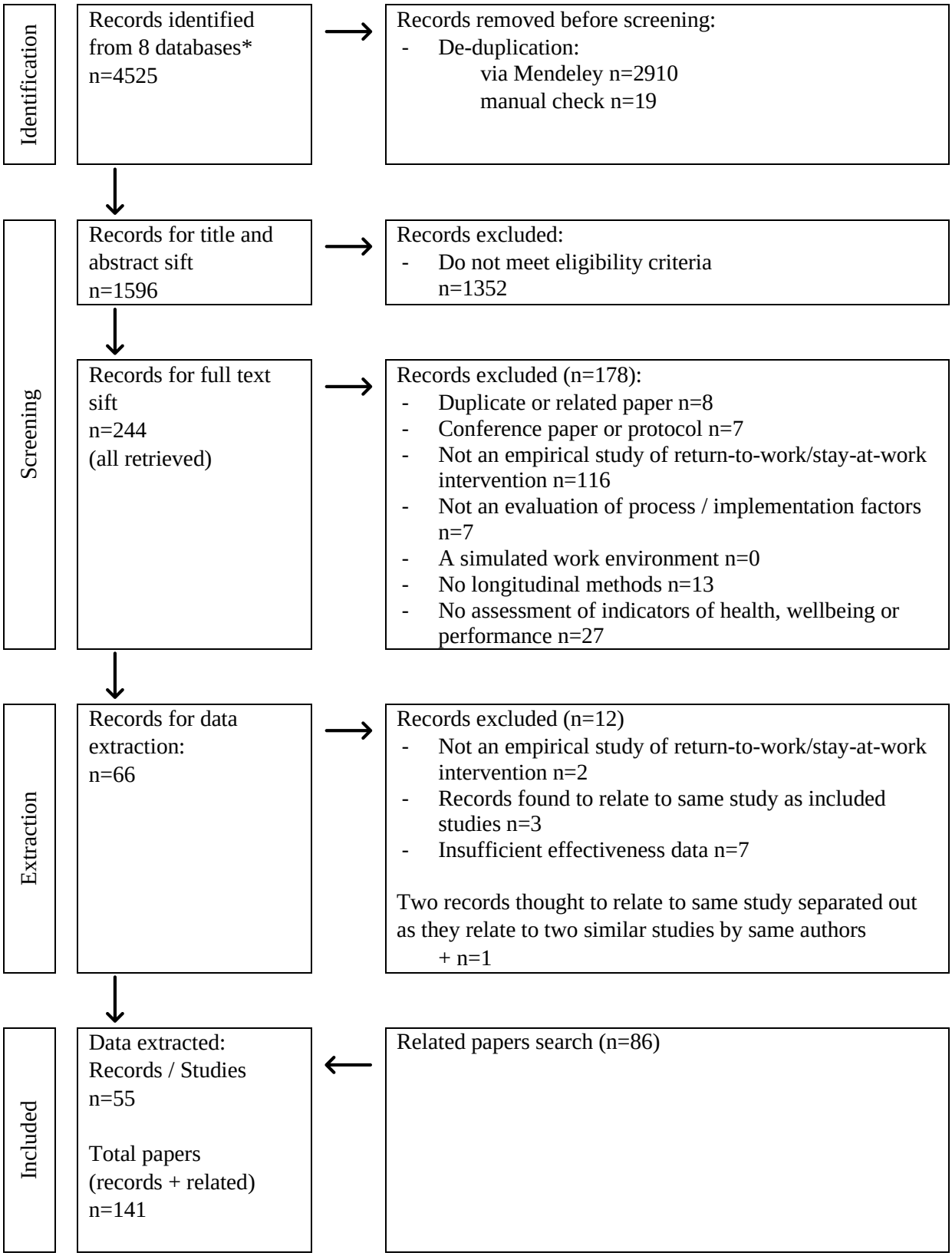
Table continues.

Evidence statement	Grading	Rationale for grading	Contributing studies
9b: Where intervention delivery staff have tasks that conflict with delivery of the intervention, any facilitating features of intervention recipients can be undermined	Promising	Five studies, three with appropriately powered, randomized designs and two with rich process analysis	Ferguson,2013,Foldal,2021,Hoefsmit,2016a,Karlsson,2023,Kanera,2016
9c: Symptom severity does not necessarily influence intervention effectiveness, but recipients' motivation to engage can	Initial	Eight studies, but two studies specifically related to motivation both of which had high attrition rates	Adab,2021,Carolan & Visser,2018,Cotner,2015,Hasson,2011,Lammerts,2017a, Larsson,2021,Magnavita,2024,Notenbomer,2018
10: Actors in the non-work context do not affect the implementation or effectiveness of employability and health interventions	Initial	Five studies on facilitating factors and 3 of hindering factors, no randomized trials reporting fully implemented and effective interventions, no study reporting hindering factors was associated with an ineffective intervention	Geraedts,2014b,Hasson,2011,Kanera,2016,Bal,2017,Ferguson,2013,Johansson,2021b, Lamble,2019,Magnavita,2024
11: Line managers can undermine employability and health interventions	Promising	Eleven studies, but only one an appropriately powered, randomized design.	Mustard,2017,Parsons,2021,Pittam,2010,Buijs,2009,Hoefsmit,2016a,Karlsson,2023, Johansson,2021b,Bal,2017,Carolan & Visser,2018,Magnavita,2024
12: For those interventions delivered by external agencies and without extensive organizational involvement, senior managers do not influence the implementation or effectiveness of employability and health interventions	Strong	Twelve studies, including three studies using randomized designs and reporting rich process analyses.	Aanesen,2022,Adab,2021,Carolan & Visser,2018,Schubin,2020,Ferguson,2013, Foldal,2021,Hasson,2011,Lamble,2019,Martin,2015a,Pittam,2010,Radford,2018, Tamminga,2012
13a: Expert/strategic implementers can contribute to the implementation and effectiveness of interventions, but the contribution is not a sufficient condition for consistent intervention effectiveness	Strong	Eight studies, including two appropriately powered randomized designs and five studies reporting rigorous process analyses	Buijs,2009,Cotner,2018,Cotner,2015,Johansson,2021b,Lamble,2019,Pittam,2010, Sherwood,2023,Taylor & Blackburn,2020
13b: Issues with physicians and service provider organizations can have a negative impact on the implementation and effectiveness of employability and health interventions. Other hindering factors associated with expert or strategic implementers can be overcome	Initial	Small number of studies (6) of physicians or service providers. None were randomized trials. Eight studies of other a range of hindering factors had some level of effectiveness or implementation.	Physicians/service providers:Mustard,2017,Lammerts,2017a,Tamminga,2012,Volker,2017, Brämberg,2015,Martin,2015a Other hindrances: Bouwsma,2014,Ferguson,2013,Hasson,2011,Hilarión,2020,Larsson,2021, Mowbray,1994,van Duin,2021a,Volker,2017

Table continues.

Evidence statement	Grading	Rationale for grading	Contributing studies
14: Employability and health interventions can be beneficial for work performance outcomes, provided they are implemented in full or in part, bring about benefits for employability and/or health and have at least a moderate level of intensity and interactions with professionals and/or other service users.	Initial	Fourteen studies, but only three reporting beneficial effects on work performance of which one was a randomized trial	Arends,2014a,Bal,2017,Brämberg,2015,Buijs,2009,Foldal,2021,Geraedts,2014b,Karlsson,2023,Lacaille,2008,Martin,2015a,Notenbomer,2018,Parsons,2021,Rymenans,2024, Tamminga,2012,van Vilsteren,2016
Facilitating features of the internal omnibus context	No evidence	Three studies, two of the same kind of intervention and two studies with problematic methods	Cotner,2015,Hilarión,2020,Rymenans,2024
Proactive management around health/wellbeing	No evidence	Six studies, but heterogenous findings and only two randomized designs	Brämberg,2015,Schubin,2020,Geraedts,2014b,Lacaille,2008,Mustard,2017,Parsons,2021
Facilitating organizational cultural or political factors	No evidence	Only one study reported on this factor so no comparison of more or less effective interventions possible	Cotner,2015
Innovation around health/wellbeing	No evidence	Only one study reported on this factor so no comparison of more or less effective interventions possible	Brämberg,2015
Hindering features of intervention governance	No evidence	Only three studies reported on specifically on hindering features. One reported both facilitating and hindering features. The other studies also reported adverse external omnibus contexts and difficulties coordinating service providers.	Oude Geerdink,2024,Lammerts,2017a,Van Egmond,2016b
Sequencing of intervention activities	No evidence	Fifteen studies reported on sequencing, but there are no commonalities across the studies	Blajeski,2024,Bouwsma,2014,Brämberg,2015,Buijs,2009,Cotner,2018,Cotner,2015, Geraedts,2014b,Henderson,2023,Hoefsmit,2016a,Johansson,2021b,Kanera,2016, Lammerts,2017a,Larsson,2021,van Duin,2021a,van Vilsteren,2016
Non-work context	No evidence	Small number of studies (4), and no consistency in reporting specific implementation issues	Schubin,2020,Rymenans,2024,Johansson,2021b,Lamble,2019
Co-workers	No evidence	Small number of studies (6), and no consistency in reporting specific implementation issues	Foldal,2021,Johansson,2021b,Magnavita,2024,Schubin,2020,Lamble,2019,Rymenans,2024
Senior managers influence on employability and health interventions within organizations	No evidence	Small number of studies focused on delivery within employing organizations (2)	Mustard,2017,Johansson,2021b
Adaptations to interventions or organizational context to allow fit and reduce conflict between intervention and organization	No evidence	Small number of studies (4), and no consistency in reporting specific implementation issues	Ferguson,2013,Oude Geerdink,2024,Hoefsmit,2016a,Janssens,2024b
Implementation and cost-effectiveness	No evidence	Twelve studies. Only two interventions cost-effective. No pattern of differentiation between cost-effective and cost-ineffective interventions.	Arends,2014a,Geraedts,2014b,Hoefsmit,2016a,Janssens,2024b,Lammerts,2017a, Meijer,2006,Parsons,2021,Radford,2018,Rebergen,2010Rebergen,2010,Tamminga,2012, van Vilsteren,2016,Volker,2017

Figure 1. Flow chart of sifting process.



* MEDLINE, Academic Search Complete, Business Source Ultimate, Scopus, Web of Science Core, PsycINFO, Econlit, PubMed Central (PMC) searched between 30/09 and 02/10/2024.

Figure 2. Theory of change.